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September 30, 2003, 16:33:04; Search time 795,169 Seconds (without alignments) 10633.856 Million cell updates/sec
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Copyright (c) 1993 - 2003 Compugen Ltd.
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                                      GGAATGGCCAGATGCCCATATGATGCCAAACATGCCAACGTTGCACTGTTTGCAGATGGA 1197
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                                                                                                                                                                                                                         Nucleic acid coding for human semaphorin 6A-1 used as diagnostic agent, therapeutic agent, for modulating immune system, in gene therapy or for effecting differentiation, cytoskeletal stabilization and/or plasticity
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Matches 3093; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SECX protein; human; secreted; membrane-associated; cancer; proliferation regulator; differentiation regulator; non-malignant tumour; immune disorder: autoimmune disease; transplant rejection; allergy; AIDS; infection; inflammatory disorder; arthritis; haematopoietic disorder; skin disorder; cardiovascular disorder; atherosclerosis; restenosis; spinal cord injury; skeletal disorder; rytostatic; immunosuppressive; anti-HV; anti-inflammatory; anti-arthritic; anti-arter-lose-lerosis; neuroprotective; vulnerary; anti-allergic; anti-arter-lose-lerotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3598 GTGACTGTCTCGAGGCAGCCCAGCCTCAACGCCTACAACTCACTGACAAGGTCGGGGCTG
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                                                                                                  3418 CCCACGAACTCGCTCACGAGAAGCCACCACCACCACTCTCAAAAGAAACAACAACTAAC
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This invention relates to the CDNA Sequences encoding an isolated novention relates to the protein encoded by the nucleic acid of the invention is useful for treating central and peripheral nervous system diseases (e.g. peripheral neuropathy, Huitington's disease, amportant sclerosis); neurodegenerative diseases (e.g. parkinson's disease, Alzheimer's disease); autoingumene disease (e.g. parkinson's disease, Alzheimer's disease); autoingumene disease (e.g. systemic lipus erythematosus, remamatoid arthritis, insulin-dependent diabetes mellitus;; mycloid or lymphoid cell disorders (e.g. anaemia and thrombocytopaenia); wounds, ulors, bone disorders (e.g. anaemia and thrombocytopaenia); ungo no liver librosis; pone disorders (e.g. stroke, head trauma); lung or liver librosis; reperfusion injury in various tissues; bacterial, viral or fungal infections allergic conditions such as allergic rhinitis, astima; coagulation disorders (e.g. heamophila); cancer and tumours; and inflammatory diseases (e.g. septic shock, Crohn's disease, anaphylaxis). The protein may be used to inhibit the growth, infection or function of infectious agents such as bacterial, fungi, virases, or to effect bodlly characteristics, backerial relation/differentiation, stem cell growth factor, haemostals regulation, immune stimilating or suppressing cohemotactic/chemokinetic, heemostatic and thrombolytic, receptor/ligand, and antiinflammatory activities. The CDNA sequences of the invention are sequence represents a novel human constrained or its invention are sequence is an expressed sequence tag (EST) and was identified.
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Gaps 51; 98.0%; Score 3032; DB 25; Length 4280; 98.4%; Pred. No. 0; ative 0 Mismatches 0; Indels 51; Sequence 4280 HP; 1185 A; 1165 C; 1001 G; 929 T; 0 other; Best Local Similarity 98.4 Matches 3093, Conservative Query Match Best Local S

240 300 540 TTTGTGGGCCACAAGCCAGGACGGAACACACACAGACACAGGCTGGACATCCAGATG 180 CAGGCCGATGTAGACACATGCAGAATGAAGGGAAAACATAAGGATGAGTGCCACCACTTT 360 AACCCTTCCTGCAGAAACTATAAGATGGATACATTGGAACCATTCGGGGATGAATTCAGC 480 541 AAACTATACTCAGCCACAGIGACIGACTTCCITGCCAITGACGCAGTCATTTACCGGAGT 600 CCAGAAGATTCTGAGCCAATCAGTATTTGGCATGGCAACTATACAAAACAGTATCGGGTG 120 09 ATTATGATGAAGGGAAGCCTCTACATIGCTGCTAGGGACCATATTTATACTGTTGAT GGAATGGCCAGATGCCCATATGATGCCAAACATGCCAACGTTGCACTGTTTGCAGATGGA 1 ATGAGGICAGAAGCCTIGCTGCTATATTTCAGACIGCTACACTTTGCTGGGGGTTTC 241 ATAGACACATCACACACGGAAGAAATTTATTGTAGGAAAACTGACATGGAAATCTAGA 327 387 600 301 627 481 747 61 121 181 361 421 g q q Q Q qq qq CC ò QQ Óχ ò ò ò ò ò 9 αd ò

ς	0	CTIGGAGAAAGCCCTACCCTGCGGACCGTCAAGCACGATTCAAAATGGTTGAAAGAACCA 660
ପୁର	867	TIGGAGAAAGCCCTACCCTGCGGACCGTCAAGCACGAITCAAAATGGITGAAAGAACCA 92
δò	661	ACTICITCICAGGGAAATAGCA 72
qc	927	ACTITCHICAAGCCGTGGATTACGGAGATTATCTACTTCTTCTTCAGGGAAATAGCA 98
οy	721	GTGGAGTAIAACACCAIGGGAAAGGTATCCCAAAGAGIGGCTCAGGTTTGTAAGAAT 780
qq	987	SCAGTATAACACCATGGGAAAGGTAGTTTTCCCAAGAGTGGGTTGTAAGAAT 10
Qy	781	SATATCGGAGGATCTCAAAGAGTCCTGGAGAAACAGTGGACGTCGTTCCTGAAGGCGCGC 840
qa	1047	ATATGGGAGGATCTCAAAGAGTCCTGGAGAACAGTGGACGTCGTTCCTGAAGGCGCGC 11
Oy	641	ITGAACIGCTCAGTTCCIGGAGACTCTCATTTTATTICAACATTCTCCAGGCAGITACA 900
qa	1107	TGAACTGCTCAGTTCCTGGAGACTCTCATTTTTTTTCAACATTCTCCAGGCAGTTACA 1
ολ	901	GATGTGTCCTGGCAACGTTTGTACACCTTATAAC 96
qq	1167	AIGIGATICGTATCAACGGGCGIGAIGTIGTCCTGGCAACGTTTCTACACCTTATAAC 122
ð	196	SCARCCCIGGGTCTGCAGCCTATGACATGCTIGACATIGCCAGTGTTTTTACT 102
QO	1227	ATCCCTGGGTCTGCATCTGTGTTTTTTTTTTTATAAATGCTTGACATTGCCAGTGTTTTTAACT 128
ολ	1021	GGAGATICAAGGAACAGAGCCCCGAATACCACCTGGACACCAGCTCCTGATGAACGA 1
q	1287	AGAITCAAGGAACAGAA
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qc	1347	TICCTAAGCCCAGGCCAGGTIGCTGTGTGTGTGTTTTTTTTTT
ÃÔ		GIICCCIGATGATACCCIGAACTICAICAAGACGCACCGCTCAIGGATGA
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Ş	1201	TCTICAACAGGCCAIGGTTCCTGAGAACAATGGTCAGAIACCGCCTT 1
Q	4	CAGTGCCCTCCATCTTCAACAGGCCATGGTTCCTGAGAACAATGGTCAGATACGGCCTT
CY	:N	SCAGIGGACACAGCIGGGCCAIATCAGAATCACACIGIGGITTTICIG
qq	1527	CCARAATTGCAGTGGACACAGCTGCTGGGCCATATCAGAATCACACTGTGGTTTTTCTG
Λ̈́O	1321	AAGGGAAICATCTIGAAGTTITIGGCCAGAAIAGGAAATAGIGGTTTICTA
ลูด	1587	GATCAGAGAAGGGAATCATCTTGAAGTTTTTGGCCAGAATAGGAAATAGTGGTTTTTTT
O.y.	1381	CAGCCTTTTCCTGGAGGAGATGAGTGTTTACAACTCTGAAAAATGCAGCTATGAT 1
ଫ୍ସ	1647	GACAGCCTTTTCCTGGAGGAGATGATGTTACAACTCTGAAAAATGCAGCTATGAT 17
Qy	1441	GAGTCGAAGACAAAAGGATCATGGSCATGCAGCTGGACAGAGAAGCAGCTCTCTGTAT 15
Ç	1707	AAAAGGATCATGGGCATGCAGGTGGGAGAGCAAGCTCTGTAT 176
ŏŏ	1501	3 156
qu	1767	TIGCGTICTCTACCIGITGTATAAGGTICCCCTIGGCCGGTGIGAACGACGGAAG 1
Qy	1561	CTGTATTGCCTCCAGAGACCCATATTGTGGATGGATAAAGGAAGG
qa	1827	GTAAAAAACCIGTATTGCCTCCAGAGACCCATATTGTGGATGGATAAAGGAGGTGT 18
ογ	1621	COTGCAGCCATTIATCACCCAACAGCAGACTGACTTITGAGCAGGACATAGAGCGTGGC 168
οg	1887	CTGCAGCCATTTATCACCCAACAGCAGACTTTTGAGCAGGACATAGAGCGTGGC 1

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The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-dT primer and an oligonucleotide complementary to the complementary strand of a polypucleetide which comprises one of the 5602 nucleotide sequences defined in the specification, where the
                                                                                                                                                                   3327 CCCTCGCTAAAGCCGGACGTACCCCCCAAACCATCCTTTGCTCCCTTTCCACATCCATG
                                          CCCTCGCTAAAGCCGGACGTACCCCCCAAACCATCCTTTGCTCCCTTTCCACATCCATG
            CTGGAAATGCACCACTCTTTCCTACGGGGTTGACTATAAGAGGAGCTACCCCACGAAC
                                                                        CAGAGGGTGGACTCCATCCAGGTGCACAGCTCCCAGCCATCTGGCCCAGGCCGTGACTGTC
                                                                                                                                                        TCGAGGCAGCCCAGCCTCAACCCCTACAACTCACTGACAAGGTCGGGGCTGAAGCGTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                               TCGCTCACGAGAAGCCACCAGGCCACCACTCTCAAAAGAAACAACACTAACTCCTCCAAT
antisense therapy;
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, Otsuki T
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A, Nagai K,
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Sugiyama T, Wakamatsu
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8 6 8 8 8 8 8 8 8	5 6 5 6 5 6 5 6 	6 6 6 6 6 6 6 6	6 8 6 8 6 8 6 6 6
oligonucleotide comprising a sequence complementary to the complementary strand of a polynacicotide which comprises a 5'-end complementary strand of a polynacicotide which comprises a 5'-end sequence complementary in the polynacicotide which comprises a 5'-end sequence and are oligonucleotide comprises a 3'-end sequence, where the complementary is polynacicotide comprises a 1'-end sequence, where the complementary is coligonucleotide comprises a 1'-end sequence, where the complementary is coligonucleotide comprises a 1'-end sequence, where the complementary is neglected in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primer sets can be used in antisense therapy and control to an advortaging roplants. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers also when 11-length cDNAs. The primers also when 11-length cDNAs. The primers are also useful for the control and/or diagnosis of the abnormality of the primers and AAH13631 and AAH13631 and AAH13631 appread to AAH13631 and AAH3631 appread to AAH13631 appread to AAH13631 and AAH3631 appread to AAH13631 and	Query Match Best Local Similarity 99.8%; Score 2969.6; DB 22; Length 6060; Best Local Similarity 99.8%; Pred. No. 0; Matches 2994; Conservative 0: Mismatches 4; Indels 2; Gaps 2; QY 96 CAACTATACAAAACAGTATCCGGTGTTTGTGGCCCACAAGCCAGGACACCCACACA 155	12. TAGGGACCATATTATACTATAGACACATCACACGGAGAATTTATTGTAG 27. CAAAAAACTGACATGGAAATTATAGACACATGAGACACAGGAAATTATTGTAG 27. CAAAAAACTGACATGGAAATCTAGACAGGCCGATGTAGACATGCAGAATGAAGGAAA 18. CAAAAAACTGACACACATGTAGACAGCCGATGTAGACATGAAGAATGAAGGAAA 38. CATAAGGATGAGTGCCACATTTATTAAAGTTCTTCTAAAGAAAACGATGATGAAGAA 39. GATTGTCTGTGGAACTAATTTAATTAAAGTTCTTCTAAAGAAAACGATGATGATTTTTTT 39. GATTGTCTGTGGAACTAATGCTTTAATTAAAGTTCTTCTAAAGAAAACGATGATGATTTTTT 30. GATTGTCTGTGGAACTAATGCTTCAACCTTCCTGCAGAAACTATAAGATGGATACATT 1111111111111111111111111111111	9b 36i GGAACCATTCGGGGATGATTCAGCGGAATGGCCCATATGATGCCAAACATCT 420 9y 516 CAACGTTGCAGTTTGCAGAAACTATACTCAGCCACAGTGACTCCTTGC 575 i''(I'')'(I'')'''')''' 12 i CACTTGCACTTTTGCAGAAACTATACTCAGCCACAGTGACTCCTTGC 460 576 CATTGACGTTGCAGTTTGCAGAAACTATACTCAGCCACAGTGACTCCTTGC 460 576 CATTGACGATCATTTACCCGAACTTTGTAGAAACCCTACCTCCTTGC 460 6y 616 CATTGACGCAGTCATTTACCCGAGTCTTGGAAAGCCCTACCTGCGACCGTCAAGCA 540 6y 636 CCATCCAAAAGGTTGAAAGAACCATTGTTCAAGCCGTGCAGCATTATAT 695 1111.111.111.111.111.111.111.111.111.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence encodes a novel secreted protein from clone CJ145_1 isolated from a human fetal brain cDNA library. This protein has applications for nutritional use, cytokine and cell proliferation/differentiation activity, immune stimulating or suppressing activity, hematopoiesis regulating activity, tissue growth activity, activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombotic activity, receptor/ligand activity, anti-inflammatory activity, acadherin/tumour invasion suppressor activity, tumour inhibition activity and other activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09
                                                                                                                                                                                                                                  Secreted protein; human foral brain; nutrition; cytokine; stimulant; cell proliferation; differentiation; immune system; suppressor; ligand; regilator; hematopolesis; tissue growth; activin; inhibin; haemostatic; chemotaxis; chemotaxis; thrombosis; receptor; cadherin; tumour; anti-inflammatory; ds.
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/note= "isolated from clone CJ145_i"
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Pred. No. 0;
1; Mismatches
                                                                                                                                                                                                             Huma: secreted protein clone CJ145_1 cDNA
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Treacy M;
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Matches 2923; Conserv
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18-DEC-1996;
13-JAN-1997;
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      haematopolesis
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                                                                   Homo sapiens.
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inuman cDNA clones represented in AAF98174 - AAF98489 encode secreted proteins AAB90567 - AAB90750. The cDNA clones are isolated from various itsue types, and may be used in the prevention. Treatment and diagnosis of diseases associated wit: Lampropriate protein expression. The polypeptides and nucleic acids may be used as nutrients or to modulate cytokine and cell proliferation/differentiation activity and may also be involved in modulation of the immune system. The cDNA sequences, proteins, their agonists and/or antagonists exhibit hamatopidesis regulating activity: issue growth activity; activin/inhibin activity; chemotactic/chemokineic activity; hammostatic and thrombolytic hamatopidesis activity; receptor/ligand activity; anti-inflammatory activity; hammostatic and thrombolytic tumour inhibition activity; anderin/tumour suppressor activity; and/or tumour inhibition activity; and in the invention are probes
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Isolated nucleic acids encoding polypeptides, useful for modulating e.g. cytokine and cell proliferation/differentiation activity, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22; Length 3550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3550 BP; 957 A; 994 C; 856 G; 742 T; 1 other;
                                                                           immune system and hematopolesis regulating activity
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                                                                                                                                              Disclosure; Page 486-487; 557pp; English
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tches 2923: Conserv
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Human; secreted protein; nutrient; cytokine modulator; proliferation; differentiation; immune system modulator; tissue growth; chemotactic; haemostatic; thrombolytic; anti-inflammatory; tumour inhibition; ss;

Db		ପ୍ର	1566 GGAGTCGAAGACAAAAAGGATCATGGGCATGCAGGTGGACASAGCAAGCAGCTCTCTGTAT 1625
ČÅ.	AACCCITOCTGCAGAAACTAYAAGATGGAFGATTGGAACCATTGGGGGATGAATTCAGC 48	oy Sp	1501 GTTGCGTTCTCTACCTGTGTGAAGGTTCCCCTTGGCCGGTGTGAACGACGAAGGAAG
λο S	GGAATGGCCACATGCCCATATGATGCCAAACATGGCAACGTTGCAGGTTTGCAGATGGGA 54 GGAATGGCCACATGCCCATATGATGCCAAACATGCCAACGTTTGCAGATGGA 54 CAAATGGCCACATGTTTTGCAGATGCCAAACATGTTTTTTTT	ें दे	1561 TGTAAAAAACCTGTATIGCCTCCAGAGACCCATATIGTGGATGGATAAAGGAAGGTGGT 1620
g & 6	500 GGAALGACCAATGCCCATA,SALGCCAAACALGATGCAACTGLTAGTGTTGCAGTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	के ब	1621 GCCIGCAGCATTTAFCACCCAACAGAGACTGACTTTTGAGCAGACATAGAGCGTGGC 1680
3 & q	CTIGGAGAAGCCTACCCTGGGACCGTCAACGAGTGAAATGGTGAAAGAACCA 66 [LIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	δ d	1681 AATACAGATGCTGGGGGACTGTCACAATTCCTTTGTGGCACTGAATGGGCATTCCAGT 1740 i.HIH.HIH.HIH.HIH.HIH.HIH.HIH.HIH.HIH.HI
QY Ch	PACTITISTICAAGCGSSAVTACSGAGATTATATCTACTICTICAGGGAAATAGCA 72 	ð 8	1741 TCCCTCTTGCCCAGCACCACCACTCAGATFCGACGGCTCAAGAGGGGTATGAGTCTAGG 1800
oy e	GIGGAGTATANCACCATOGGZAAGGTAGTTTCCCAACAGTGCCIOAGGTIGTAAGAAT 78	<i>ਨ</i> ਬ	1801 GGASGAATGCTGGACTSGAAGCATCTGCTTGACTCACCTGACAGAGCACAGAGCCTTTGSGG 1860
7 A A	GATATGGGAGGATCTCAAAGAGTCCTGGAGAAACAGTGGACGTCGTTCCTGAAGGCGCGC 84 7:1111711117111171111711171171171171717171	da Gy	1861 GCAGTGTCTCCCAIAATCACCAAGACGAGGAGTGATTCGGGAAAGTTACCTCAAA 1920 1861 1862 1863 1864 1865 1866 1866 1866 1886
Qy	AGTTACA 90 	oy Dp	1921 GGCCACGACCAGCTTCCCGTCACCCTCTGGCCATTGCAGTCATCCTGGCTTTCGTC 1980
oy d	GAIGTGATTGGTAICAAGGGGGGGGAATGTTGGGGAAGGTTTGTAGACGTGAAAGGGGGGGG	⊹් අ	1981 ATGGGGGCCTCTTCTCGGGCATCACCGTCTACTGCGTCTGTGATCGGCGCAAAGAC 2040
Qy Dia	AGCALCCCTGGGTCTGCAGGGGCTGATGATGAGGTGGGGAACGTTTTTAGCT 102 AGCALCCCTGGGTCTGCAGTCTGTGCCTATGACATGCTTGACATTGCCAGTGTTTTTAGCT 102 AGCATCCTTGGGTCTGCAGTGTGGGCTATGACATGACTTTGACATTGCAGTGTTTTTAGT 11 AGCATCCTTGGGTCTGGAGTGGGGTTATGACTTTGACATTGCAAGTGTTTTTAGT 11	oy Db	2041 GTGGCTGTGGTGCAGCGCAAGGAGAAGGAGCTCACTCGCCGCGGGGGGGCTCCATGAGC 2100 11111111111111111111111111111111
i o d	GGGAGATTCAAGAACAGAAGTCTCCTGATTCCAC;GGACACCAGTTCCTGATGAACGA;108 GGGAGATTCAAGGAACAGAAGTCTCCTGATTCCAC;GGACACCAGTTCCTGATGAACGA;108 GGGAGATTCAAGGAACAGAACAGAATTCTCCTGATTCCACCTGGAAAACAGAATTCAACAGAACAGAACAGAACAGAAATTCAACAGAATTCAACAGAAATAACAGAAATTCAACAGAAATAACAAGAAATTCAACAGAAATAACAAATTCAACAAATAAAAAAAA	Oy Dp	2101 AGCGTCACCAAGCTCAGCGGCCTCTTTGGGGACACTCAATCCAAAGCCCAAAGCGGAG 2160 11111111111111111111111111111111111
. <i>6</i> 8	GITCCTAAGCCAGGCAGGTTGCTGTGGCTGCTCTCTCTTAGAAGATATGCAACC 114 [1111:1111:1111:1111:1111:1111:1111:	9.7 3.6	CGCCACTCAIGGACAAGGGCAAGCTCGCCACTCCCGGCAACACGGCCAAG 222 : : :
ć,	TCCAATGAGTCCCTGATGATACCTGAACTTCATGAAGACGCACCGGTCATGGATGAG 120	ද් ප්	2221 ATGCTCATTAAAGCAGACCAGCACCACCTGACCTGACGGCCCTCCCCACCCCAGAGTCA 2280 11111111111111111111111111111111111
S & Q	CCAGTGCCTCCATCTTCAACAGGCCATGCTTCCTCASACAATGGTCAGATACGGCTT 226 GCAGTGCCCTCCATCTTCAACAGGCCATGCTTCCTCASACAATGGTCAGATACGGCTT 236 GCAGTGCCCTCCATCTTCAACAGGCCATGGTTCCTCAGAACAATGGTCAGATACGGCTT 338	oy op	2281 ACCCCAACGCTGCAGCAGAAGGGAAGCCCAGCGGGGCAGCGGCGGGGGGGG
ζΟ	ACCAAAATTGCAGTGGACACGCGCGCCATATCAGAAACACGCGCGCG	ं दरा चरा	2341 CAGAACCICATCAATGCCTGCACAAAGGACAIGCCCCCCATGGGCTCCCCIGTGATTCCC 2400 1:
λο a	OSATCAGAGAAGGGAATCAIGTTGAAGTTTIIGGCCAGAATAGGAAATAGGGGTTTCTA 138 	oy Ob	2431 ACGGACCTGCCGGGGCCTCCCCGGCCACCCCAGCGTGGTGCTGCCGTGCCTGCC
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G G	GGAGTCGAAGACAAAGGACATGGGCATGCACCTCGACAGGCAAGCAGCCTCTGTAT 150	da da	2521 AIGGCGCIGGAGGACCAGGCGCCACACIGGAGIAIAAGACCATCAAGGAACAICTCAGC 2580 111111111111111111111111111111111111

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                                                  <u>AGCAAGAGTCCCAACCAIGGGGTGAACCTIGTGGAGAACCTGGACAGCCIGCCCCCCAAA 2640</u>
               AGCAAGCGGCTGGAAAIGCACCACTCCTTCCTACGGGGTTGACTATAAGAGGAGGTAC 2760
                                                                                       CCCACGAACTCGCTCACCAGAAGCCACCAGGCCACCACTCTCAAAAGAAACAACAACTAAC 2820
                                                                                                                                                      ICCTCCAAITCCTCTCACCTCTCCAGAACCAGAGCTTTGGCAGGGGAGACAACCCGCG 2886
                                                                                                                                                                                        COCGCCCGCAGAGGGTGGACTCCATCCAGGTGCACAGCTCCCAGCCATCTGGGCAAGGC 2940
                                                                                                                                                                                                    GTGACTGTCTCGAGCCAGCCTCAACGCCTACAACTCACTGACTAGGTCGGGGCTG 3000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       proliferation regulator: differentiation regulator; non-malignatt tumnour; immune disorder; autoimmune disease; transplant rejection; allergy; AIDS; infection; inflammatory disorder; arthritis; haematopolatic disorder; skin disorder; cardiovascular disorder; atherosclerosis; restenosis; neurological disease; Alzheimer's disease; trauma; wounding; spinal cord injury; skeletal disorder; cytostatic; immunosuppressive; anti-HIV; antiinflammatory; antiathritic; antiateriosclerosic; neuroprotective; vulnerary; antiallergic; antimicrobial; cardiant;
                                                                                                                             Human semaphorin protein-like splice variant SECX 2864933-2 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                protein; human; secreted; membrane-associated; cancer;
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Sequences AAA93616-A93631 and AAA93673-A93676 represent nucleic acids which encode human SECX proteins (AAB23029-B23048). The SECX proteins of their invention are either secreted or membrane-associated proteins on date as regulator of cellular proliferation and differentiation. SECX proteins or nucleotides are useful for diagnosing the presence of, or predisposition to, a disease associated with altered levels of SECX proteins and nucleotides. The SECX proteins may be useful to screen compounds that modulate SECX activity or expression. The interaction of a SECX protein with other cellular proteins may be useful to modulate the activity of a partner protein, cellular proliferation, cellular of the activity of a partner protein, and may be used datect SECX mRNA of septeic lesions in the SECX protein, and may also be used to modulate recombinant expression of SECX protein, and may also be used to modulate of septeic lesions in the SECX protein, and any also be used to modulate of SECX expression (e.g. using antisense objignoucleotides). SECX nucleic acid sequences are also useful for identifying a cell or tissue type in a biological sample, and in forensic biology. SECX primers or probes are useful for detecting the presence of SECX nucleotides and for screening tissue cultures for contamination. Diseases that may be treated or prevenced using SECX proteins or nucleotides and for screening tissue cultures for contamination of disorders, including autoimmune diseases, transplant rejection, allergies, AISS, including autoimmune diseases, ransplant rejection, allergies, AISS, including autoimmune diseases, arthritis, haemalopoical diseases, arthritis, haemalopoical diseases, arthritis, haemalopoical and disorders, cardiovascular disorders, atherosciences, rathritis, haemalopoical and disorders, spinal cord injury), and skeletal
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                                                                                                                                                 polynucleotides useful for diagnosis, prevention and treatment parhological states such as cancer, immune, cardiovascular and neurological disorders
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                                                                                                             Novel human membrane associated or secreted polypeptides and
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Pred. No. 0;
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                                                                                                                                                                                                                                                                                               Claim 3: Fig 3: 151pp; English.
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93.9%;
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WPI; 2000-594318/56.
                                        P-PSDB; AAB23031
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1714 GITGCGITCTCTACCTGTGTAAAGGITCCCTIGGCCGGTGTGAACGAACGAAC 1733	1741	1921 GGCCACGACCASCTGGTCCCGTCACCCTTGGCCATTGCAGTCATCCTGGCTTTTCGTC 1960	2101 AGGTCACCAAGCTCTTTTGGGGACACTCAATCCAAGACCCAAAGACCGGGGG 216 2104 AGGTCACCAAGCTCAGCGGCTCTTTGGGGACACTCAATCCAAGACCCAAAGCCGGGG 216 2104 AGGTCACCAAGCGCCTCTTTGGGGACACTCCAAGACCCAAGCCGGGC 220 2101 GCCATCCTCAGCCCACTCATGCAAGGGCAACTCGCGCAACTCCGGCAAGACGGCCAGG 222 2209 GCCATCTCACCACCATCATGCACAAGCTCGCCACTCCCGGCAACAGGCCAAG 226 221 ATGCTCATTAAAGCAGCACCACCTGGACCTGCCCACTCCCCCCCC	2281 ACCCCAACGGAAGCGAAACCCAGGGGACCCCGCGGGAACC 2340 11111111111111111111111111111111111	Y Y Y Y Y Y Y Y Y Y
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polypeptide (II) sequences. (I) is useful as hybridisation probes, and for chromosome and gene mapping, and in recombinant production of (II). The and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for its identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful for treating inaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations capposable for generate disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS$(4197-AAS$4564 represent novel human capposable configuration this patent did not appear in the printed sequence other types of the invention.

Specification, but was obtained in electronic format directly from MIPO
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Best Local Similarity 91.29
Matches 2408; Conservative
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                                                                                                                                                                                                                                                           2809 CCCACGAACTCGCTCACGAGGAAGCCACCTGACCACCTACTCTCATCAGAAGCAACACTAA
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medical imaging; diagnostic; genetic disorder; ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA encoding novel human diagnostic protein #4611.
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food supplement; medical imaging; diagnostic; genetic disorder;
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Note: The sequence data for this patent did not appear in the specification, but was obtained in electronic format directly
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Pred. No. 0;
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polyguicleotide which comprises a 3'-end sequence, where the body and a bigonucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene incarapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by
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CTACAACTCACTGACAAGGTCGGGGCTGAAGCGTACGCCCTCGCTAAAAGCCGGACGTACC
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the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAH03166 to AAH3628 and AAH3633 to AAH3742 represent human cDNA sequences: AAB9246 to AAB53893 represent human amino acid sequences: and AAH3629 to AAH3632 represent oligonucleotides, all of which are used in the exemplification
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                                                                                                                                 Sequence 3041 BP; 864 A; 885 C; 714 S; 637
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us-09-856-681-1.rng

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proliferation regulator; differentiation regulator; non-maignant tumour; inferentian regulator; differentiation regulator; non-maignant tumour; infection; inflammatory disorder; arthrils; haematopoletic disorder; skin disorder; cardiovascular disorder; atherosclerosis; restenosis; neurological disease; Alzheimer's disease; traima; wounding; spinal cord injury; skeletal disorder; represents; immunosuppressive; anti-inflammatory; anti-inflammatory;
                                                                                  TCGAGGCAGCCCAGCCTCAACGCCTACAACTCACTAGAAGGTCGGGGGTGAAGGTACG
                                                                                                                2101 CCTCGCTAAAGCCGGACGTACCCCCCAAACCATCCTTTGCTTTCCACATCCATG
                                                                                                                                                                                          CCCTCGCTANAGCCGGACGTACCCCCCAAACCATCCTTTGCTTTCCACATCCATG
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Sequences AAA93616-A93631 and AAA93673-A93676 represent nucleic acids which encode human SECX proteins (AAB23029-B23046). The SECX proteins of the invention are either secreted or mebrane associated proteins and act as requiator of cellular proliferation and differentiation. SECX proteins or nucleotides are useful for diagnosing the presence of or predisposition to, a disease associated with altered lovels of SECX proteins and nucleotides. The SECX proteins are also useful to screen compounds that modulate SECX activity or expression. The interaction of a SECX protein with other cellular proteins may be useful to modulate the activity of a partner proteins may be useful to modulate differentiation and cell survival. SECX nucleotides are useful for the

Claim 3; Fig 15; 151pp; English.

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recombinant expression of SECX protein, and may be used detect SECX mRNA or requence lesions in the SECX gene. They may also be used to modulate SECX expression (e.g., using antisense oligonuclectides). SECX nucleic acid sequences are also userial for identifying a cell or tissue type in a biological sample, and in forersic biology SECX primers or probes are userial for detecting the presence of SECX nucleotides and for screening itssue cultures for contamination. Diseases that may be treated or proverted using SECX proteins or nucleotides include cancer (e.g., objected carcinoma, prostate cancer), benign tumours, immune disorders (including autoimmune diseases, transplant rejection, allerques, AIDS), infections, inflammatory disorders, arthritis, hadmatopoietic disorders, skin disorders, cardiovascular disorders, althrima (e.g., Alzheimer's disorders), trauma (e.g., Alzheimer's disorders).
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The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-di primer and an oligonousleotide complementary to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprise a sequence complementary to the comprise and oligonucleotide comprises a sequence or persent and on oligonucleotide comprises a 1'end sequence or persent the comprises at least 15 nucleotides and the combination of polynucleotide which comprises a 1'end sequence, where the oligonucleotide which comprises at 1'end sequence, where the oligonucleotide which comprises at 1'end sequence, where the oligonucleotide which comprises at least 15 nucleotides and the combination of the specification. The primer sets can be used in antisense therapy and in the specification. The primer sets can be used in antisense therapy and in the particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers also wobtaining of the full-length cDNAs are present human sequences; and AAH13628 and AAH13633 represent human amino acid sequences; and AAH13632 to AAH13632 represent thuman mino acid sequences; and AAH13632 to AAH13632 represent conspiration and in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primer sets for synthesizing polynuclectides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                Human; primer; detection; diagnosis; antisense thorapy; gene therapy;
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                  1861 AGTTACCICAAAGGCCACGACCAGCTCG 1888
1909 AGITACCICAAAGGCCACGACCAGCIGG
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Sugiyama T, Wakamatsu
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Qy 2348 TCATCAATGCCTGCACAAAGGACATGCCCCCCATGGCTCCCTGTGATTCCCACGGACC LITTILL 111111111111111111111111111111111111	2528 TGGAGGACCAGCCACACTGGAGTATAAGAC [IIII: IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	SGAGGCTCCTGGGTCCCCGGGAGCTC 	1501 ACTOGOTCACGAGAAGCCACCAGGGCCACCACTCAAAAGAAA 1501 ACTOGOTCACGAGAAGCCACCAGGGCCACCACTCAAAAGAAA 2828 ATTCCTCTCACCTCTCCAGAAACCAGGGGGGGGGGGGGG	accasscratary 111111111 3ccasscratara 2ssscrataras 1111111111111	0y 3008 CGCCTCGCTAAAGCCGACGTCCCCCAAACCTTTGCTCCCTTTCCACATCCA	RESULT 13 AAK94565 TD AAK94565 standard; cDNA: 2227 BP. XX AC AAK94365; XX XX DT 06-NCV-2001 (first entry)	len len s.
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GCTCACCCACTCGCGCCGGGGCTCCATGAGCAGCGTCACCAAGCTCAGCGGCCTCTTTGG 2129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clones. 830 cDNA molecules encoding a human protein have been clones. 830 cDNA molecules encoding a human protein have been stolated and nucleotide sequences or 5' and 3'-onds of the CDNA molecules have been determined. Primers for synthes sing the full length cDNA are useful for clarifying the function of the protein encoded by length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length without any special methods. The production of the full length cDNA easily without any special methods. The present sequence is a full length Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPD.
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                                                                                                                                                                                                                                                                                                                                                                       clones and their
                                                                                                                                                                                   Isogai I, Hayashi K, Ishii S, Kawai Y;
a T, Nagai K, Kojima S, Otsuki T, Roga
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 8; SEQ ID NO 3087; 1380pp + sequence listing; English
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                                                                                                                                                                                                                                                                                                                                                                       Primers useful for synthesizing full length cDNA
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Pred. No. C;
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99.9%;
9938-0194486.
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                                2000JP-0118774
                                                             2000JP-0183765
                                                                                                                                                                                   Best Local Similaria,
Matches 1743; Conservative
                                                                                                                          (HELI-) HELIX RES INST
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Best Local Similarity
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P-PSDB; AAM93444
                            11-JAN-2000;
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Sequence 2306 BP: 579 A: 739 C: 577 G; 411 T: 0 other;
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                                          53.98;
99.98;
                                         Query Match
Best Local Similarity 99.9
Matches 1667: Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes primer sets for synthesising 5602
cull-length cDNAs defined in the Specification. Where a primer set
comprises: (a) an oliqo-dT primer and an oligocuclectide comprises one of
the 5602 nucleotide sequences defined in the specification, where the
cut the compises at least 15 nucleotide which comprises one of
the 5602 nucleotide comprissing a sequence complementary to the
complementary strand of a polyancheotide which comprises a 5-end
sequence and an oligonucleotide comprising a sequence complementary to the
complementary strand of a polyancheotide which comprises a 3'-end sequence complementary to a
polyancleotide which comprises a 3'-end sequence complementary to a
complementary strand of a sequence is selected irom those defined in
the 5'-end sequence/3'-end sequence is selected irom those defined in
the specification. The primers are useful for synthesising polyanucleotides,
particularly full-length cDNAs. The primers are also useful for the
detection and/or diagnosis of the abnormality of the proteins encoded by
the full-length cDNAs. The primers allow obtaining of the full-length
cDNAs easily without any specialised methods. AAR03166 to AAR13632
AAR13633 to AAR13642 represent human cDNA sequences; AAR92446 to
AAR13633 to AAR13642 represent human cDNA sequences; and AAR13629 to AAR13632
represent clayonucleotides, al. of which are used in the exemplification
of the present invention.
                                         Human; primer; detaction; diagnosis; antisense therapy; gene therapy; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
1621 GCCCTACAACTCACTGACAAGGTCGGGGCTGAAGGGTAGGCGTGGCTGGGTAAAGGGGGAGGT
                            3030 ACCCCCAAACCATCCTTTGCTCCCTTTCCACATCCATGAAGCCAATGATGCGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sogai T. Nishikawa T. Hayashi K. Saito K. Yamamoto J;
Sugiyama I. Wakamatsu A. Nagai K. Otsuki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 8; SEQ ID 17567; 2537pp + CD ROM; English.
                                                                                                                                                                                                                                                                                  CDNA sequence SEQ ID NO:17567
                                                                                                                                                                                            ВР
                                                                                                                                                                                          AAH17861 standard; cDNA; 2306
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11-JAN-2000; 2000JP-0118776.
02-MAY-2000; 2600JP-0183767.
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09-JUN-2000;
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Ishii S,
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                                                                                                                                                            1486 ACCAGCTCTCTGTATGTTGGGTTCTGTACCTGTGTGATAAAGGTTCCCCTTGGCCGGTGT 1545
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                                                                                                                                                                                                                                           1846 GAACGACATGGGAAGTGIAAAAAAACCTGIATTGCCTCCAGAGAGCCATATTGIGGATGG
                                                                                                                                                                                                                                                                               286 GAACGACATGGGAAGJGTAAAAAACCTGTATTGCCJCCAGAGACCCATATTGTGGATGG
                                                                                                                                                                                                                                                                                                                       GGGTATGAGTCTAGGGGAGGAA'fGCTGGACTGGAAGCATCTGCTTGACTCACCTGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        526 GGGTATGASTCTAGGSGAGGAATGCTGGACTGGAAGCATCTGCTTGACTCACCTGACAGC
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                                                                                1426 AAAIGCASCIATGAISGAGTCSAAGAGAAAAGGAICAIGGGCATGCAGCTGGACAGAGCA
                                                                                                                                                                               Length 2306;
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0
                                        1; Indels
    DB 22;
Score 1656.4;
Pred. No. 0;
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The invention relates to isolated polynuclectide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynuclectides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polypurcleotide sequences have applications in diagnostics forensics, gene mapping, identification of mutations capament types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human capament contains agreement or this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO polyperial contains and in the printed appear in the printed appear in the printed appear in the printed appear and the acquence of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960 CAGCATCCCTGGGTCTGCAGICTGTGCCTATGACATGCTTGACATTGCCAGTGTTTTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260 TACCAAAATTGCAGTGGACACAGCTGCTGGGCCATATCAGAATCACACTGTGGTTTTTCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2592 BP; 655 A; 754 C; 659 G; 524 T; 0 other;
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84.3%; Pred. No. 0;
11ve 0; Mismatches 325;
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                                                                                                                                                                                                                                                                                                                                              Claim 1; SEO ID No 4057; 103pp; English
Tang YT;
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Matches 1809; Conservative
Liu C,
                                                                     2001-639362/73
                                                                                                      PSDB; ABG04066
   Drmanac RI,
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Search completed: September 30, 2003, 16:58:34 Job time : 808.168 secs

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using sw model - nucleic search, OM nucleic

September 30, 2003, 16:35:33; Search time 5937.36 Seconds (without alignments) 12661.132 Million cell updates/sec Run on:

US-09-856-681-1 3093 Title: Perfect score:

Sequence:

IDENTITY_NUC Gapop 10.0 , Gapext 1.0 Scoring table:

residues 22781392 segs, 12152238056 Searched:

45562784 Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 Misimum DB seq Maximum DB seq

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

EST: * Database

em_csthm: em_csthm: em_esthm: em_estoy: em_cstpl: em_stro: em_htc:* cm_estba:* qb_estl:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

			Description		BC032619 Home sapi	AK042751 Mus muscu	AK082711 Mus muscu	CB605722 AMGNNUC:M
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			DB		5 11	11	1	14
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AL IGNMENTS

HTC 04-MAR-2003 Homo sapiens, similar to sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A, clone IMAGE:5578066, mRNA. BE032619... GI:22749800 Eukaryola: Metazoa; Chordata; Crania.a; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 6875) Direct Submission Submitted (66-JUN-2002) National Estitutes of Health, Mammalian Gene Collection (MCC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, Homo sapiens (human) Homo sapiens Strausberg, R. RESULT 1 HC032619 LOCUS DEFINITION ORGANISM AUTHORS ACCESSION REFERENCE TITLE JOURNAL VERSION KEYWCKDS SOURCE

Contact: MGC help desk file in the MGC help desk famil: agapbs rimall.nih.gov transpersion in the MGC/DCTD/DTP cDNA Library Preparation: Life Technologies, Inc. Consont Library Arrayed by: The I.M.A.G.E. Consortium (LLML) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC). NIH-MGC Project URL: http://mgc.nci.nih.gov REMARK COMMENT

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Web Site: http://www.nisc.nih.gov/
Contact: nisc_mgc@hdri.mih.gov/
Akhter,N., Ayelo.K., Beckstrom-Sternborg.S.M., Benjamin.B.,
Biakesley,R.W., Bouffard,G.G., Hrec.,K., Brinkley.C., Brooks.S.,
Dietrich.N.L., Ganite,S., Gune, Y., Gupta,J., Haghighi,F.,
Hansen,N., Ho.S.-L., Marlins,E., Kwong,P., Laric.P., Legaspi.R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell.J., Poarsoc.R., Stantripop,S., Homds,P.J., Touchman,J.W.,
Tsurgcon,C., Yodr.J.L., Malker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
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/tab_host="DH108"
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   Cuackenbush, J. Schring, A. Sakala, K., Staubil, F., Suzzki, R., Tomita, M., Magner, L., Washio, T., Schring, K., Okido, T., Furzno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Foffelli, D., Bojunga, N., Carnino, P., Carnino, P., Bult, G., Baldarelli, R., Barsh, G., Blake, J., Foffelli, D., Bojunga, N., Flatcher, C., Fojita, M., Garboldi, M., Garbindi, M., Hutt, C., Fistcher, C., Fojita, M., Garboldi, M., Gastindich, S., Hill, D., Hoffmann, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P., Hoffmann, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P., Ring, B., Ring, B., Ring, M., Rodriguez, L., Sakamono, N., Sasaki, H., Sato, S., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Gyor-Gwa, K., Wang, K.H., Weltz, C., Whittaker, C., Wliming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsiki, S. and Hayashizaki, Y.
Functional annotation of a full-longth mouse cond collection Nature 409 (6821), 685-690 (2001)
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Analysis of the mouse transcriptome based on functional annotation of 60,700 tull-length conns.

All Nature 420, 563-573 (2020)

E ( (bases 1 to 3226)

Adachi, J. Alzawa R., Aktoura, T., Hara, A., Hashizme, W., Hayashida, R., Hayasak, T., Hayashida, R., Hayasak, T., Hayashida, R., Hayasak, T., Hayasak, T., Hayashida, R., Hayasak, T., Kondo, S., Kouro, H., Kouda, M., Kayawa, T., Katoh, H., Kayawa, T., Katoh, H., Kondo, S., Kouro, H., Kouda, M., Nowasak, R., Kutihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nawamura, M., Nishi, K., Nomura, X., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Salto, R., Satoh, B., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, E., Sasaki, D., Shibata, K., Shibata, M., Shibata, M., Takaka, K., Shibata, Takak, K., Shibata, M., Takahashi, F., Takak, K., Shibata, M., Takahashi, F., Takak, K., Shibata, M., Takahashi, F., Takak, K., Shibata, M., Takak, M., Shibata, M., Takak, M., Shibata, M., Takak, M., Shibata, M., Takak, M., Shibata, M.
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/translation="MRPAALELCLTLEHCAGAGFPEDSEPISISHGNYTKQYPVFVGH
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Direct Submission

Submitted (16-JUL-2061) Yoshihide Hayashizaki. The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1 7-22 Suchiro-cho, Tsurumi-ku, Yokohama Kanagawa 210-6045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tcl:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KPGRNTTQRHRLDICMIMIMNKTLYVAARDHIYTVDIDTSHTEEIYCSKKLTWKSRQA
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/close_lib="RHKEN full-length enriched mouse cDNA library'
/dev_stage="7 days ncomate"
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URL:http://genome.gsc.r.ken.go.jp/.
URL:http://fantom.gsc.r.ken.go.jp/.
Matsuc.Y., Nikaide,1.,
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LKARLNCSVPGDSHEYFNILQAVTDVIRINGRDVVLATFSTPYNSIPGSAVCAYDMLD
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DCHNSFVALNJISTPLPDYEMSFNRVYGQFIAIYINT"
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GMARCPYDAKHANIALFADGKLYSATVĮDĒLAIDAVIYRSLGDSPĮLRTVKHDSKWLK
EPYFVQAVDYGDYIYFFFREIAVEXNĮMGKVVFPRVAQVCKNDMGSQRVLEKQWISF
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HTC; CAP trapper

qq		KEYWORDS
0y	901 GATGTGATTGGTATGARGGSGGGTGATGTTGTGGGGTAAGGTTTTGTAGAGGTTATAAG 960	OKSAN, SM
qa	1571 GATGEGAATIGGGAATAAGGCGGGAAGTEGTGTTGGGAACCTTTTGGAACCTTATAAG 1630	REFURENCE
0y	961 AGCATCCCIGGGTCIGCAGICIGTGCCTATGACAIGCTTGACATTGCCAGTGTTTTAGT 1020	TITLE
qc	1631 AGCATCCCAGGITCTGCAGTCTGTGCCTAGACATGCTTGACATGCTAATGTTTTCACT 1690	MEDLINE
Λ̈́O	21 GSGAGATICAAGGAAGAGTCTCCTGATTCCACTGGACACAGTTCCTGATGAAGA 108	REHERENCE AUTHORS
oga aga	1691 GGGAGGTTCAAGGAACAGAAATCACCTGACTCTACCTGGACACCGGTTCCAGACGAACGA	TITE
	81 GITCCTAAGGCCAGGCCAGGITGCTGGCTGGCTGCTGCTGGTAGAAAATATGGAAG 114 (414444444441444) 14 4 4 4 4 4 4 4 4 4 4	JOURNAL
QQ	1751 GTCCCTAAGCCCAGGCCAGGCTGTTGTGGTCATCCTCTTTAGAAAATATGCAACC 1810	GNI I DEM
Oy Db	1141 ICCAATGAGTTCCCIGATGATAACCTGAACTTCATCAACACGCACCCGCTCAIGGAIGAG 1200 	REFERENCE AUTHORS
οy	1201 GCAGTGCCCTCCATCTTCAACAGGCCATGGTTCCTGAGAACAATGGTGAGATACCGGCTT 1260	
QQ.	1871 GEAGEGETECATCATCATCATGACTISGITECTSAGAACATGGICAGATACGGCTG 1930	_
δō	1261 ACCAMAMITGCAGTGGACACAGGTGCTGGGCCATATCAGAATGACAGTGTGGTTTTTCTG 1326	TILLE
qq	1931 ACCAMANTISCAGTAGAGAACGIGCCGGGCCATATCACAATCACACTGTGGTTTTCCTG 1990	JOURNAL
oy Db	1321 GGAFGAGAAGGAATGATGATGAGAGATTTTTGGCCAGAATAGGAAATAGGATTTTGTA 1380 HTT HTT THE THE TELL HTT HTT HTT HTT HTT HTT HTT HTT HTT	NEDLINE PUBMED REFERENCE AUTHORS
0у	1381 AATGACAGCTITTCCTGGAGGATGAGTGTTACAATCTGGAAAAATGCAGCTATGAT 1443	
qc	1018 1018 1018 1018 1018 1018 1018 1018	
Qy	1441 SGNGTCGAAGACAAAAGGAIGGIGGAIGGIGGACAGGGGAGCAAGCA	
C,O	2111 GGTGTAGAAGAAAAGGATCAGGGCATGGACTGGACAGAGCGAGTGGCTCACTGT 2170	
	01 GTTGCGTTGTCTACCEGTGTGAAAGGTTGCCGTTGGGGAGTGTGAACAACAAGGAAG 156	
QQ Q	2171 GTTGCAITCTCTACTTGTGTGATCAAGGTGCCTGTTGGCCGCTGTGAGGGACATGGGAAG 2210	
٥٧	1561 ISTRAMARANCHGIATTGCOTCCAGAGACCGIATTGGGGAAAAAGGAAGGGGGT 162.	
QQ	2231 TGTAAAAAAACCTGCATCGCCTCCAGAGACCCGTATTGTGGGGTAAGGGAAAGTGGT 2290	
Çy	1621 GCCTGCAGCATTTATCACGCAAGAGCAGACTTTTGAGCAGGAGATAGAGGGGGC 1880	31
qq	CTGTGCCCCATCTGTCACCCCTTASCAGACTGACATTTGAGCAGGACATTG	JOURNAL
٥y	1681 AATACASATGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	SENTENCE OF SENTEN
Db	2351 AATACGGACGGCTAGGAGACTGTCAAATTCCTTCGTGGCACTGAATGACATTTCAACT 2410	AUTHORS
٥y	1741 TCCCT 1745	TITLE
QQ	2411 CCrct 2415	JOURNAL
RESULT 3		AUTHORS
AK082711	AV09771	

AK082711 3329 bp mRNA linear HTC 05-DEC-2002 Max musculus 0 day neorate cerebellum cDNA. RIKEN full-length enriched library, clone:c230094A19 product.sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A,

LOCUS

full insert sequence. AK082711 AK082711.1 GI:26349884

> ACCESSION VERSION

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Wish misculus (hoise mouse)

Mish misculus (hoise)

Mish misculus
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KPGRNTTORRELDIOMIMIMRTLYVAARDH-YTVOIDTSHTEEIYCSKKLTWKSRGA
DYTCRMKGKKNGCHNFYRLLKKNDDI,IFVCGTNARNPSENTRYVPLTSFGGDEF
GWARCPYDAKHAN,IALFANGELYSARYTDETA IDAVITYRSLGSENTRYVPLTSFKGDEF
GWARCPYDAKHAN,IALFANGELYSARYTDETA IDAVITYRSLGSENTRYVPTSKKEN
RPYFVQAVDYGDY "YEFFREIAVEYNTHGKVVFPRVAGOVCKNDMGGSORVLEKQWISF
IKARLNCSVPGDSHFYENILQAVTDVILLROWDYNATTSPPYNSIPGSAVCAYDMID
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LARIGSSGFLNGSLELEBMNVYNPEKCSYDGVEDKRIMGMQLDRASGSLYVAFSTCVI
                                 Direct Submission.
Submitted (16-APR-2002) Yoshibide Hayashizaki. The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration: Research Group, RIKEN Schomic Schences Conter (GSC), RIKEN Yokohama Institute: 1-7-22 Suchiro-cho, Tsurumi-ku, Yokohama.
Kanagawa 230-0045, Japan (E-mail:genome-resegsc.riken.go.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVPLGRCERHGKCKKTCIASRDPYCGWVRESGSCAHLSPLSRLTFEQDIERGNTDGLG
                                                                                                                                                    Fax:81-45-503-9216)

Fax:81-45-503-9216)

For Library was prepared and sequenced in Mouse Genome

Fucyclopedia Project of Genome Exploration Research Group in Riken

Genomic Sciences Center and Genome Science Laboratory in RIKEN.

Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             enriched mouse cDNA library"
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   Yasunishi, A.
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Please visit our web site for further details.
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URL:http://gennom.gsc.riken.go.jp/.
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   Toya, T.,
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/mol_typo="mRNA"
/strain="C5785/6J"
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/db_xref="G1:26349885"
Takeda,Y., Tunaka,I., Temaru,A.,
Muramatsu,M. and Hayashizaki,Y.
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ATAGACACATCCCACACAGAAATTTACTGTAGCAAAAAACTGACATGGAAATCTAGA
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	RESULT 4 CB665722 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOUNCE ORGANISM AUTHORS TITLE JOURNAL	FEATURES SOUTCE BASE COUNT ORIGIN	Ouery Match Best Local Matches 139 Oy 1338 Oy 1358 Db 71

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/iab_host-"JHIOB (phage-resistant)"
/clone_lib-"NIH_MAGC_2"
/clone_lib-"NIH_MAGC_2"
/rothe-"Organ: skin; Vector: poNV-SPORT6; Site_1: Not1:
Site_2: Sall; cloned unidirectionally. Primer: Oligo dT.
Average Insert size 2 kb. Library constructed by Life
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Pred. No. 1.5e-226;
0; Mismatches 19; Indels 7;
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Matches 956; Conservative (
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CONA Library Arrayed by: The I.M.A.6.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCC clone distribution Liformation can
found through the I.M.A.G.E. Consortium/LLN, at:
Plate: Land1204 row: c column: 12
High quality sequence stop: 733.
Location/Qualifiers
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: AFCC/DCTE/DTP
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	2572 CATCTCAGCAGGAGAGTCCCAACCATGGGGTGAACCTTGTGGAGAACCTGGACAGCCTG 2
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	0y 2692 ACCGGTCTAAGCAAGGGCTGGAAATGCACCACTCCTCTACCGGGGTTGACTATAAG 2753 111111111111111111111111111111111111
Tissue Procurement: Invitrogen CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)	9y 2752 AGGAGCTACCCACGAACTCGCTCACGAGAAGCCACCAGGCCACCACTCTCAAAAGAAAC 2813
DNA Sequencing by: Agencourt Bioscinone Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLM, a.: http://mage.lnl.qov	Oy 2812 AGACTAGACTCCTCGANTCCTCTCGAGAAACCAGAGCTTTGGCAGGGGAGC 287) 1
FEATURES	9y 2872 AACCCGCGCCGCCCCCCCAAGGTGGACTCCAGGTGCAGGTGCACGCCCAGCCATCT 2931 (1111 1
/organism="Kens" /mol_type="minkn" /db_xref="taxon:9606" /clone="InAGE:558479"	0y 2912 GGCCAGGCGTGACTGICICGAGGCAGCCTCAACGCCTACAACGCAGCAAGG 2991
/dol_nos - UTINH_MG_125" /clone_lib-THH_MG_125" /note="Organ: Ovary (pool of 3): Vector: pCMV-SPORTS. Site_l: EcoRV (destroyed): Site_2: Not1: RNA source pool	2y 2992 TC-GGGGCTGAAGCGTAGG CCCTCGCTAAAGCCGCAGCGTACCCCCGAAACCATCGTTG 3049 11 11 11 11 11 11 11 11 11 11 11 11 11
of Library is oligo-dynamical in age from 38 to 49 yo. Library is oligo-dynamical and directionally closed (EcoRV site is destroyed upon cloning). Average insert size 12 kb, insert size range 1-3-5 kb, fibrary is commalized and enriched for full-length clones and was constructed by C. Guber (Invitrogen). Research Genezies	UN 3650 CICOCCTTTCOACATOCATG AAGCCCAATGCCTGTAC 3689 11
tracking code 036." BASE COUNT 284 a 428 c 309 g 161 t. i others ORIGIN	PESGLT 7
Query Match 29.0%; Spore 896: DH 12: Length 1183; Best Local Similarity 99.0%; Pred. No. 1.3e+225; Matches 932: Conservative 0: Mismatches 6: Indols 7: Saps 3:	### ##################################
2152 AAGCCGGAGGCCATCCTCACGCCACTCATGCACGCCAAGCTCGCCACTCCCGGCCAC 2211 11141,1111,1111,1111,1111,1111,1111	Dos. Homo sapiens Homo sapiens Eskaryota: Metazoa, Chordata: Craniata; Vertebrata; F
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2332 GAGAGGAACCAGAACCTCATGAATGCCTGCACAAAGGACATGCCCCCATGGGCTCCCCT 2391	COMMENT CONTACT: Takao Isogai Genomics Laboratory

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HRI human CDNA project; 5'- 5 3'-end one pass sequencing: Helix
Research Institute, cDNA library construction: Department of
Virology, Institute of Medical Science, University of Tokyo, and
Helix Research Institute.
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0 Mismatches
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/clone_lib="puace2"
/note="Vector: pMEI8SFLS"
197 c 200 g 236
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                                                                                                                                                                                                                                                                                                                                     /moi_type-"mRNA"
/db_xref="taxon:9606"
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Helix Rosearch Institute
1532-3 Yana, Kisarazu, Chiba
Tel: 81-438-52-3936
Fax: 81-438-52-3986
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/note-"Organ: eyc; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT. Average. insert size 1.75 kb. Library constructed by Life
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891 bp mRNA linear EST 04-SEP-2002
S', mRNA sequence.
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NIH-MGC http://mgc.nci.nih.gov/.
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Tissue prourement: ATC
cDNA Library Preparation. Life Technologies, Inc.
cDNA Library Preparation. Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.l.n.gov
Plate: LLAM13454 row: b column: 02
High quality sequence stop: 677.
                                                                                    AGTICCCTGATGATACCCTGAACITCATCAAGACGCACCGGCTCATGGATGAGGCAGTGC
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/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_67"
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/db_xref="taxon:9606"
/clone="IMAGE:6138529"
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Best Local Similarity 97.3*
Matches 860; Conservative
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KEYWOADS
SOURCE
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/cioner_rawGE:4872704*
/tissue_type="melanotic melanoma, high MDR (cell line)"
/tissue_type="melanotic melanoma, high MDR (cell line)"
/clone_lib="DH10B (phage-resistant)*
/clone_lib="NHH_MGC49"
/note="Organ: skin; Vector: polB7; Sitc_i: Xhol; Sitc_2:
ECORI; cDNA made by oligo-dT priming, Directionally cloned
into ECORI/Xhol sites using the following 5' adaptor:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2263 CTCCCCAGCCCCAGAGTCAACCCCAACGCTGCAGGAAGGGGGAAGCCCAGCCGGGGAGC 2322
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Fred. No. 4e-196;
0; Mismatches 31; Indeis 6;
        LLCM1749 row: k column:
nality sequence stop: 862.
Location/Oualifiers
                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                     /mci_type="mRNA"
/db_xref="taxon:9606"
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95.8%;
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Best Local Similarity 95.88
Matches 849; Conservative
                Plate: LL(
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1666 GACATAGAGGGGGAATACAGAT-GGGGGGGGGGTGTGTGAATICCTTGGGGGTTT 1724
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(bases 1 to 987)
NIH-MG http://mgc.nci.nih.gov/.
                                                                                                                   188 GAAAGATATGCAACCTCCAATGAGTTCCCFGATGATACCCTGAAGTTCATGAAGAGGGAC
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cONA Library Preparation: Ling Hong/Rubin Laboratory CONA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Incyte Genomics. Inc. Cione distribution: MSC clone distribution information can found through the I.M.A.G.E. Consortium/LLMI at: http://image.llnl.gov
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: AICC/DCTD/DTP
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2621 TGGACAGCCTGCCCCCCAAAGITCCACAGCGGAGGCCTCCCTGGGTCCCCCGGGAGC 2678	Qy 1894 Db 401	4 GGAGTGRITCGGGAAAGTTACCTCAAAGGCCACGACCAGCTGGTTCCCGTCACCACTTG 1953 -
2679 CICCCIGICAGACOGRETAAGGAAGCOORGGAAATGCACCACTCCTTCTACGG 2738 1 1 1 1 1 1 1 1 1	Qy 1954	4 CCCATIGGAGTCATCCTGGCTTCGTCATGGGGCCGTCTTCTCGGGCATCACCGTCTAC 2013
2739 GGTTGACTATAAQAGGGCTAGGAAGAGTGGCTGAGGAGA 2782 	9y 2014 0b 521	914 IGCGTCTGTGATCAPCGGGGAAAAACGTGGCTGTGCTGCGCAGGGAAGGAGAAGGAGCTC 2073
Т 10	2y 2074 Eb 581	674 ACCCACTCGGGCCGGGGCTCCATGAGCGCGCCCCAACCCCAGGGCCGCCTCTTGGGGC 2133
DOCUS AL24344 Home sapiens PLACENTION ALTHORY EST 31-MAY-2013 DEFINITION AL54334 Home sapiens PLACENTA COT 25-NORMALIZED Home sapiens GENA ACCESSION AL54334 AND ALFORMAN AND AND AND AND AND AND AND AND AND A	Cry 2134 3b 641	134 ACTCAATCCAAAGACCCAAAGCCGGGGCATCCTCACGCCACTCATGCACGCAAG 2193
	Oy 2194	194 CTGGCCACTCCCGGCAACAGGCCAAGATGCTCATPAAAGCAGACCAGCACCACCAGGAC 2253
Eukaryota, Metazoa, Chordata, Cranlata, Verrobrata, Burelcostomi, Mammalia, Etheriata, Primates, Catarrhini, Hominidae, Homo. **REFERENCE** (bases 1 to 120) **AUTHORS** Li.M.B., Gruber,C., Jessee,T., and Polayes,D.	6y 2254 Db 769	254 CTGACGGCCTCCCCACAGAGTCAACCCGAACGCTGCAGCAGAAGCGGAAGCCCAGC 2313 (THILLIHILLIHILLIHILLIHILLIHI) CTGACGGCCTCCCCAGAGAGCCAAACGCTAACGCTGCAAGGCTAAGGCTAAAGCCCAGC 819
TILE FULLTORITH CONA INDIBILES and NOTWALLIZATION JOURNAL ORDHISSACH COMMENT ON Feb 15, 2001 this sequence version replaced q1:12875822. Contact: Genoscope	Oy 2314	314 CGCGGCGCGCGCGGAGTSGGAGGAGGAACCTCATCATGCTGCTGCACAAAGGACATG 2373 THE FILL FILL FILL FILL FILL FILL FILL FIL
Genescope - Centro National de Sequencace BP 191-91006 EVRY cedex - France Emali: segrefgencscope.cns.fr Library was constructel by Life Technologies, a division of	cy 2374 Cb 880	374 CCCCCCATGGGCTCCCCTGTOATTCCCACGGACCTGCGGGCCTCCCCAGCCAC 2433 1 1 1 1 1 1 1 1 1
invisional and this sequence belongs to sequence cluster zerv. For more lifermation about this cluster, see http://www.genoscope.chs.fr/ cgl-bin/cluster.cgi?seq-CSGDIOCICE0000000000000000000000000000000000	6y 2434 Db 940	434 ATOCCCAGGGTGGTGGTGCTGCCCATCAGGGGGTGCGGGGTGCGGGTGGGGGGGG
	0y 2494 0b 1660	94 CAGCCCAAAATGAGCGAGGTGGCCCAGATGGCOCTGGAGGCGCCACACTGGAG 2553
<pre>source 1to. /crqanism="Gono sapiens" /mol_type="mkNA" /do_xref="taxo.:960" /clone="CsOniniv.:7"</pre>	6y 2554 Eb 1056	94 TATAAGACCATGAGAACATGTCAGGAG 2582 1::1111: 55 TWTAAGACATCAAGGAATTYAGCAGGAG 1084
/tissue_type="PrACENTA COT 25-NORMALIZED" //close_lb="Mono sapiens PLACENTA COT 25-NORMALIZED" //note="lst strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and closed into the Not I as EcoR V sites of the powerpert & versor hashy was correllized.	RESULT 11 B0678536 1.00US DEFINITION	BG678536 848 bp mRNA linear EST 15-JUL-2002 A'ENCOURT 8208159 NIH_MGC_112 Homo sapiens cDNA clone IMAGE:6262572
BASE COUNT 277 a 373 c 315 g 214 t 22 others	z.	BQ678536 BQ678536.1 G1:21791215
Ouery Match Best Local Similarity 96.4%: Pred. No. 8.8e-196: Matches 838: Conservative 5; Mismatches 21: Indels 5; Gaps 4;	SOURCE ORGANISM	Les: Home sapiens (humar) Home sapiens Fuka-yota (hordata; Craniata; Vertebrata; Exteleostoml;
1714 TITGEGGGGGGGGGGGGTTCCGGTCTGGCCGGGGGGGGGG	REFERENCE AUTHORS TITLE	-
1774 ACGGCTCAAGAGGGTATGACTCTAGGGAAGGAATGCTGGACTGGAACTGGAACTGGAAGGATCTGGTTGACTGAGGAATGTGAAGAATGCTGAAGAGGAAGGA	COMMENT	Onpublished Coptacl: Robert Strausberg, Ph.D. Email: cgapbs rémail.nih.gov Tissue Procurement: DCTD/DTP
1834 TCACCIGACAGACAGACCTIISGGGGCAGTGICITCCCATAATCACCAAGACAAGAAG 1893		cDNA Library Preparation: Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation

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/tissuc_type="melanotic melanoma, cell line"
/lab.host="DH108 (phage-resistant)"
/clone_line="NH14_MG_112"
/note="Organ: skin; Vector: porB7; Site_1: XhoI; Site_2:
FCORI; CDNA made by oligo-dI priming. Directionally cloned
into EcoRIXXhol sites using the following S. adaptor:
GCCAGGG(G). Library constructed by Ling Nong in the
laboratory of Serald M. Rubin (University of California,
Berkoley) using ZAP-cDNA synthosis kit (Stratagene) and
Burnor Library.
NIH MC Library LIX RT (Life Technologies). Note: this is a
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5', mRNA sequence.
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1946 CCCFCTFGGCCATTGCAGFCATCCTGGCTTTCGTCATGGGGGCCGTCTTCTCGGGCATCA 2305
                                                                                                                                                         2005 COGICIACIGCGICIGIGATONICGGCGCAAAGA-CGIGGCIGIGGGAGCAG-CGCAAGGA 2063
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement. Detro/Urp
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consertium (LLNL)
CDNA Sequencia by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consertium/LLNL at:
http://mage.lln.gov
Plate: LLCM3147 row: n column: 15
High quality sequence stop: 606.
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/db_xref="taxon:9606"
/clone="1MAGE:6106551"
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                                  found through the I.M.A.S.E. Consortium/IINL at: http://image.llnl.gov
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Location/Qualifiers
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tssuo Procurement: ATCZ/STD/DTP
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DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2425 row: c column: 04
High quality sequence stop: 621.
Location/Qualifiers
                                                                                                                                  42: ACAATTCC1TTGTGGCACTGAATGGGCATTCCAGTTCCCTCTTGCCCAGCACACCACAT
                                                    12: TGAGTGTTTACAAC:CTGAAAATGCAGCTATGATGGAGTCGAAGACAAAAGGATCATGG
                                                                                                        GCATGCASCTGGACASAGCAAGCAGCTCTCTGTATGTTGCGTTCTCTACCTGTGTGATAA
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Contact: Robert Strausberg, Ph.D.
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Tissue Procurement: DalD/DTP
CDNA Library Preparation: Rubin Laboratory
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CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LJNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Close distribution: NGC close distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
Rittp://mage.llnl.gov
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Contact: Robert Strausberg, Ph.D.
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4. (cgn2_6/ptodat1/2/pubpna/USG6_NEW_PUB.seq:*
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	RESULT: US-09-91-053-3 Sequence 3. Application US/09991053 Publication No. US2003003532A1 GENERAL INPORMATION: APPLICANT: Shinkets, Richard A. TILE OF INVENTION: MGGF., AND ROUNDABOUT-LIKE FILE OF INVENTION: UNMBER: US/09/991,053 CURRENT APPLICATION NUMBER: US/09/991,053 FRIOR FILING DATE: 1999-03-09 NUMBER OF SEQ ID NOS: 81 SCHTWARE: PARENTING NOS 81 SCHTWARE: PARENTING NOS 81 SCHTWARE: PARENTING NOS 81 SCHTWARE: PARENTING NOS 82 NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: Misc_feature LOCATION: (3047) SCHEE INFORMATION: an n may be any one of a or US-09-09-091-053-3	Oue Bes Mat

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99.3%; Pred. No. 0;
ive 0; Mismatches
PRIOR APPLICATION NUMBER: 60/234,082
PRIOR FILING DATE: 2000-59-20
PRIOR APPLICATION NUMBER: 60/233,796
PRIOR FILING DATE: 2000-69-19
FROM FILING DATE: 2000-61-04
NUMBER: GFQ ID NOS: 85
SOFTWARE: Patentin Ver: 2.1
SEQ ID NO 3
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Matches 3072; Conservative
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NAME/KEY: misc_feature
LOCATION: (3047)
                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo sapiens
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Publication No. US20030054514A1
GENERAL INFORMATION:
APPLICANT: LAROCHELLE, WILLiam
TITLE OF INVENTION: MOVEL POLYNUCLEOTIDES AND PROTEINS ENCODED THEREBY
FILE REPERENCE : 1996-54.0 CLU
CURRENT APPLICATION NUMBER: US/09/957.187
CURRENT FILING DATE: 2000-09-19
PRIOR FILING DATE: 1999-03-09
PRIOR FILING DATE: 2000-03-03
PRIOR FILING DATE: 2000-03-03
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Oy 2939 CCCTOACTGTOTCGAGGACCCCAGCGTADAAGTCACTGAGAAGGTCGGGGG 2598 Db 3154 CCGTGACTGTCTGGAGGACCCCAGCGTCAGAGAGCTCACTGAGAAGGTCGGGGG 2515 Db 3154 CCGTGACGTGTCGAGAGGCTCAAGGCTAGAGGTCAGTGACTAGGTCGTTTAGAGGTCGCGTTTAGAGGTCGCCGTTTAGAGGTCGCCCGTTTAGAGGTCGCCCGTTTAGAGGTCGCCCGTTTAGAGGTCGCCCGTTTAGAGGTCGCCCGTTTAGAGGTCGCCCGTTTAGAGGTAGAGGGTAGGGTAGAGGGTAGGGTGAAGCCCCCAAACCATGCTTGCT	195-297-187-64 195-297-187-64 196-297-187-64 197-297-187-64 198-297-187-64 198-297-187-64 198-297-187-64 198-297-187-64 198-297-187-69 198-297-187-69 198-297-187-69 198-297-297-187-69 198-297-297-297-697-697-697-697-697-697-697-697-697-6	Db 550 cAGGCCGATGTAGACACATGCAGAATGAAGGGAAAACATAAGGATGAGTGCCACAACTTT 609

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: OTHER INFORMATION: an n may be any one of

US-09-991-053-5
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LOCATION: (214)..(2865)
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                   GGAGTCGAAGACAAAGGATCAIGGGCATGCAGCTGGACAGAAGCAGCACTCTCTGTAT
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                                                GTTGCGTTCTCTACCTGTGTGATAAAGGTTCCCCTTGGCCGTGTGAACGACATGGGAAG
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TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES ENCODING HUMAN SLIT-,
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES ENCODING HUMAN SLIT-,
TITLE OF INVENTION: MEGF-, AND RONNDABOUT-LIKE POLYPEPTIDES
FILE REFRENCE: 15966-540 (CON S-10
CURRENT APPLICATION NUMBER: US/09/991,053
GURRINT FILING DATE: 2002-05-23
PRIOR FILING DATE: 1999-04-09
PRIOR APPLICATION NUMBER: 09/520,781
PRIOR APPLICATION NUMBER: 09/520,781
SRIOR FILING DATE: 2000-03-08
RIOR SEQ ID NOS: 81
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 5 Ü or

3249 3008

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OTHER INFORMATION: au ::
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Best Local Similarity
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Sequence 5, Application US/09957137 Publication No. US20030054514A1 GENERAL INFORMATION:

RESULT 5 US-09-957-187-5

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APPLICANT: Shimkels, Richard A.
APPLICANT: IAROchelle, William
TITLE OF INVENTION: NOVELL POLYNCIEDTIDES AND PROTEINS ENCODED THEREBY
FILE FERENCE: 15966-540 CTP
CURRENT TRING DATE: 2000-09-19
CURRENT TING DATE: 2000-09-19
PRIOR FILING DATE: 1999-03-09
PRIOR FILING DATE: 1999-03-09
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APPLICANT: SAIMAGES, RICHARD A.
ITTLE OF INVENTION: MOVEL NICLES C ACID SECUENCES ENCOING HUMAN SLITTLE OF INVENTION: MOVEL NICLES CONTABOUT-LIKE FOLKPETIDES
FILE DE INVENTION: MEGF- 50 CON S-10
CURRENT APPLICATION NUMBER: US/09/391.083
CURRENT APPLICATION NUMBER: USSN 60/123,657
PRIOR PILLING DATE: 1999-03-09
PRIOR FILLING DATE: 2000-03-06
NUMBER OF SEQ ID NOS: 61
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Best Local Similarity 99.8%; Fred. No. 0;
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GENERAL INFORMATION:
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ORGANISM: Homo sapiens
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SULT 7 -109-957-187-29 Sequence 29, Application US/09957187 Publication No. US20030054514A1 GENERAL INFORMATION:	ठेते ठे	AITTACCGGAGTCTTGGAGAAAGCCTACCCGGACGGTCAGGACGATCAAAAIGG 64
APPLICANT: Shinkets, Richard A. APPLICANT: LARCCHEIL, WILLIAM TITLE OF INVENTION: NOVEL POLYNUCLECTIDES AND PROTRINS ENCODED THERRY FILE REFERENCE: 15966-545 CTP CURRENT APPLICATION NUMBER: (87/09/957,187)	a & a	SAAAGAACCAINCTITGITCAAGCGGGGAATTACGGAGATIATATCIACTICTITCTT SGAAATAGCGGTGGGGTATAACACCAIGGGAAAGGTAGTIITCCCAAGAGGTGGCTCA -
CURRENT FIGURE JACK 2000-04-19 PRICA PELICATION NUMBER: 60/123.667 PRICA FILING DATE: 1999-03-09 PRICA APPLICATION NUMBER: 09/520,781	న చే	769 GTITGTAAGAATGAIATGGGAGGATCTCAAAGAGICCTGGAGAAACAGIGGACGTCGIC 828
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60.8%; Score 1881.6; DB 11; Length 1890; arity 99.8%; Pred. No. 6; Oncervation 6; Wiematchise 4; Indole 6; Ga	රු අ	1669 CCTGATGAACGAGTTCCTAAGCCCAGGCTGCTGCTGCTGCTCATCCTCCTTAGAA 1128
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PRICK APPLICATION NUMBER: 60/233,798	Query Match 60.8%; Score 1881.6; DB 11; Length 1890; Best Local Similarity 93.8%; Pred. No. 0; Matches 1884; Conservative 0; Mismatches 4; Indels 0; Gaps	cy 49 GGGGCTSGTTTCCCAGAAGATTCTGAGCCAATGAGTATTCGCATGGCAACTATACAAAA 108 1	0y 109 CAGTATCCGGTGTTTGTGGGCCACAGGCGAGGACGCACACACA	0) 169 GACAICCAGAIGATHAIGATCAIGAACGGAACCTCTACAITGCTGCTAGGGACCATATT 228 HIGHLIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	29 IATACTGTGATATAGACACACACGGAAGAAATTTATTGTAGCAAAAACTGACA 288 (11111-1111-11111-11111-11111-11111-11111	0y 289 TGGAAATCTAGACAGGCCGATGTAGACAGGAAGGGAAAACATAAGGATGA 348 	03 349 TGCCACAACIITAPTAAAAGTICTTCTAAAAAAACGATGATGITTGITTGICTGIGGA 408 11-11-11-11-11-11-11-11-11-11-11-11-11-	0y 409 ACTANTECTICANCETTOCIGUAGAAACTATANGATGGATACATTGGAACCATTCGGG 468 11.1111111111111111111111111111111111	9y 469 SATGAAITCASCGGAATGGCCAATATGATGCCAAAGATGCCAAGGTTGCACTG 528 111111111111111111111111111111111111	0y 529 TTTGCAGATGGAAAACTAFACTCAGCCACAGTGACTTGCCTTGC	0.5 589 ATTTACCGGAGTCTTGGAGAAAGCCCTACCCTGGGGACCGTCAAGCACGATTCAAATGG 648	0y 649 IDGAAAGAACCATACTIGITCAAGCCGIGGATTACGGAGAITATATCTACTTCTIC 708 	2y 709 AGGGAAATAGCAGTGGAGTATAACACCATGGGAAAGGTAGTTTCCCAAGAGTGGCTCAG 768 111:111:11111111111111111111111111111	0y 769 GIITGTAAGAATGAZATGGGAGGAICTCAAAGAGTCCTGGAGAAACAGIGGAGGTCGTTC 828 HILLIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHIHI	GY 629 CTGAAGGGGGCTTGAACTGCTCAGTTCCTGGAGAGTCTCATTTTATTTCAACATTCTG 888
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GENERAL INFORMATION:
APPLICANT: Robison, Keith E.
FITLE OF TRVENTTON:
OCKREVE S800-119
CURRENT APPLICATION NO. 0820020132090Alel Nucleic Acid and Protein Homologs
FILE REFERENCE: 5800-119
CURRENT APPLICATION NUMBER: US/09/833,381
CURRENT FILING DATE: 2001-04-11
PRIOR PILING DATE: 2000-02-29
NUMBER OF SEQ ID NOS: 2050
SOFTWARE: FastSEQ for Windows Version 3.0
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100.0%; Pred. No. 1.3e-178;
Live 0; Mismatches 0;
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504; Conservative
                                                         78.79-833-381-926/c
7 Sequence 920, Application t
8 Patent No. GS20020132090Al
                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Homo sapiens
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Sequence 60, Application US/09925299
Patent No. US20020055271
GRNERAL INFORMATION:
APPLICANT: ROSEN of al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PAIO2
CURRENT FILING DATE: 2601-08-10
PRIOR APPLICATION NUMBER: US/09/055.299
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1556
                                                                                                                                                                                                                                                                                                                                                                                    # score 565; DB 9; Length 1472;
Pred. No. 3.46-166;
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LOCATION: (130)
OTHER INFORMATION: n equals a.t.,q, or c
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99.58;
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OTHER INFORMATION: n equals
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                                                                                                                                                                                                                LENGTH: 1472
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RESULT 11

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2755 AGGIACCCCAGGACTCGCTCACGAGAGCCACCACGCCCCCTCTCAAAAGAAACAAC 2814
263 AGCIACCCACGAACTCGCTCACGAGAAGCACCAGG-CACCACTCTCAAAAGAAAAAA 311
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Sequence 60, Application US/09525299
Publication No. US200303406.7A9
GENERAL INFORMATION:
TITLE OF INVENTION: Nucleic Acids, Proteins of FILE MERRENCE: PAID2
CURRENT APPLICATION NUMBER: US/09/925,299
CURRENT APPLICATION NUMBER: US/09/925,299
CURRENT FILING DATE: 2001-08-10
PRIOR PILING DATE: 2000-03-06
PRIOR PILING DATE: 2000-03-06
PRIOR PILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1556
SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (129)
CTHER INFORMATION: n equals a.t.g, or NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n equals a.t.g. or US-09-925-299-60
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Best Local Similarity 99.59
Matches 576; Conservative
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                                                                                        727 TATAACACCATGGGAAAGGTAGTTTCCCAAGAGTGGGCTCAGGTTGTAAGAATGATATG
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 607 GAAAGCCCIACCCTGCGGGCGGCCAGCACGATTCAAAATGGTTGAAAGAACCATACTTT
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                                                                                        THE
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                                                              APPLICANT: KINGRA, TOID GL al.
TITLE OF INVENTION NOVEL SEMARHORIN Z AND GENE ENCORING TELLE REFERENCE 1020-5120-
CURRENT APPLICATION NUMBER: US/10/191.413
CURRENT APPLICATION NUMBER: US/10/191.413
CURRENT ELLING DATE: 2003 01-19
SOFTWARE OF SEQ ID NOS: 20
SOFTWARE PALEDIN VERSION 3.1
SOFTWARE PALEDIN VERSION 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               929
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               Sequence 3, Application 05/1039[413 Publication No. 0520030[67482A] GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 60.0
Matches 1626; Conservative
                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (2706)..(3524)
OTHER INFORMATION:
                                                                                                                                                                                                              LENGTH: 3524
TYPE: DNA
ORGANISM: HOMO Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
NAME/KEY: CDS
CTERION: (39)..(2702)
CTER INFORMATION:
US-10-391-413-3
                                                                                                                                                                                                                                                                                                       LOCATION: (1)..(38)
OTHER INFORMATION:
FEATURE:
NAME/KEY: 3'UTR
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LOCATION: (1)...(
US-10-391-413-3
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13 GCCTTGCTGCTATATTTCACACTGCTACACTTTGCTGGGGCTGGTTTCCCAGAAGATTCT 72
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                                                           PRICE APPLICATION NUMBER: 60/16206
PRICE PLING DATE: 1999-08-03
PRICE APPLICATION NUMBER: 60/16206
PRICE PLING DATE: 1999-08-03
PRICE APPLICATION NUMBER: 09/880142
PRICE APPLICATION NUMBER: 09/88120
PRICE FILING DATE: 2000-08-22
PRICE FILING DATE: 2000-08-22
PRICE PLING DATE: 2001-03-22
PRICE PLING DATE: 2001-03-26
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PRICE PLING DATE: 2001-03-27
PRICE PLING DATE: 1999-05-17
PRICE PRICATION NUMBER: PCT/US09/05601
PRICE PLING DATE: 1999-05-17
PRICE PLING DATE: 2000-03-02
PRICE PLING DATE: 2000-03-03
PRICE PLING DATE: 2000-03-03
PRICE PLING DATE: 2000-03-03
PRICE PRICEATION NUMBER: PCT/US00/34956
PRICE PLING DATE: 2000-03-03
PRICE PLING DATE: 2000-03-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRICK FILING DATE: 2000-12-20
PRICK APPLICATION NUMBER: PCT/US01/056520
PRICK PFLING DATE: 2001-68-26
PRICK APPLICATION NUMBER: PCT/US01/17800
PRICK PILING DATE: 2001-66-01
PRICK PILING DATE: 2001-66-02
PRICK PILING DATE: 2001-66-02
PRICK APPLICATION NUMBER: PCT/US01/19692
PRICK APPLICATION NUMBER: PCT/US01/21066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCI/US01/21066
PRIOR FILING DATE: 2021-06-29
PRIOR APPLICATION NUMBER: PCI/US01/21735
PRIOR FILING DATE: 2001-07-09
                                             APPLICATION NUMBER: 60/146970
                           1999-07-20
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Best Local Similarity 60.0
Matches 1025, Conservative
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ORGANISM: Homo Sapien
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R FILING DATE: 1999-05-04
R APPLICATION NUMBER: 60/132383
R FILING DATE: 1999-55-04
R APPLICATION NUMBER: 60/135750
R FILING DATE: 1999-05-25
                                                                                                                                                    Sequence 34, Application US/9931836
Publication No. US200303245A1
GENERAL INFORMATION:
APPLICANT: DESCOYERS, Luc
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FILING DATE: 1999-06-08
                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
Pan, James
Stewart, Timothy A.
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                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                       Eaton, Dan I.
Goddard, Audrey
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APPLICANT:
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IILLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
IIILE OF INVENTION: ACIDS ENCODING THE SAME
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FILING DATE: 1998-12-23
APPLICATION NUMBER: 60/114140
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APPLICANT: Eaton. Dan L.
APPLICANT: Goddard. Audrat. A
APPLICANT: Goddwski. Paul J.
APPLICANT: Gurney. Austin L.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           367 GITCTICTAAAGAAAAAGGAIGAIGCAIIGILIGICIGIGGAACIAAIGCCIICAACCCI 426
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Wood,William
APPLICANT: Zharg, Zomin
TICLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TICLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REPERRORE: P33.8048LG15
CURRENT PREDICATION NUMBER: 105/10/137,870
CURRENT FILLING DATE: 2002-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 GCCTTGCTGCTATATTTCACACTGCTACACTTTGCTGGGGCTGGTTTCCCAGAAGATTCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior Application removed - See Palm or File Wrapper
NUMBER OF SEQ ID NOS: 550
Sequence 543, Application US/10137870 Publication No. US20030138883A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                 Smith, Victoria
Stewart, Timothy A.
                                                                                                                                                                                                                             Gerritsen, Mary E
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K
                                                                                                         Beresini, Maureen
                                                                                                                                                                                                                                                                             Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                               Sherwood, Steven
                                                                                                                                                                                Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                     Gao, Wei-Qiang
                                                                                                                              DeForge, Laura
                                                                                                                                                           Desnoyers, Lac
                                                                         Applicant: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                         Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo Sapien
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Matches 1025, Conserv
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APPLICANT:
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TIGGAGATGGAAAUTA 548	
467 GCONGATOGCCOATATOACGCAAACATTGAACTTGAACTTGAACATTGAACATTGAAACATTAACATTGAACATTTGAACATTTGAACATTTGAACATTTGAACATTTGAACATTTGAACATTTGAACATTTGAACATTTCAACATTTGAACATTTCA	1486 GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG

us-09-856-681-1.rni

nucleic search, using sw model OM nucleic

September 30, 2003, 16:35:21; Snarch time 207.509 Seconds (without alignments) 6578.995 Millon cell updates/sec Run on:

US-09-856-681-1 3093 | algaggicagaagcottych......coartoatgcqigtacataa 3095 Title: Perfect score:

Scoring table:

Sequence:

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569978 seqs, 220631566

Searched:

length: 0 length: 2000030000 Minimum DB seq Maximum DB seq Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

Issued_Patents_NA:*
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2: /cgn2_6/ptodata/i/ina/5A_COMB.seq:*
3: /cgn2_6/ptodata/i/ina/6A_COMB.seq:*
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5: /cgn2_6/ptodata/i/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/i/ina/PCTUS_COMB.seq:*

Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Result No.	Score	Ouery Match	Ouery Match Length	DB	Q.F.	Description	
	555.4		3524	4	US-09-077-940A-3	Sequence 3, Appli	
7	546.8	17.7	3692	₹	-09-077-		
۲.	443.6		2790	4	38-39-254-594-5	i in	
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7	166	5.4		1	US-08-121-713D-57		
œ	166		2854	•	US-08-835-268-57	5.7	
9	166	5.4	2854	~	269-090-60	57,	
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Ħ	166		2854	7	US-09-060-610-57	57.	
1.2	156	5.	2854	ur:	PCT-US94-10151A-57	57,	
e 11	146.4	4.7	3560	~	US-08-121-713D-59	59,	
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15	146.4	4.7	3560	7	US-09-060-692-59	59.	
9.7	146.4	4.7	3560	m	US-08-833-391-59	59,	
17	146.4	4.7	3550	•1	US-09-060-610-59	59,	
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19	142.2	9.	2504		US-08-121-713D-63	63,	
20	~	4.6	2504	-	US-08-835-268-63		
21	ci.	4.6	2504		US-09-060-692-63	63.	
22	142.2	4.6	2564		JS-08-833-391-63	63	
23	~;	4.6	2564	•	US-09-060-610-63	63,	
24	142.2	9.4	2504	ເກ	PCT-US94-10151A-63	63	
25	126.8	e-1	2670	-	US-C8-121-713D-61	61,	
56	125.8	4.5	2670	П	-08-835-268-	51,	
27	126.8	·!	2670	7	US-09-050-692-61	Sequence 51, Appl	

Sequence 61, Appl Sequence 61, Appl	61,	53,	Sequence 53, Appl Sequence 53, Appl	53,	Sequence 53, Appl	Sequence 2, Appl1	Sequence 1, Appli	Sequence 1, Appl:	Sequence 24, Appl	Sequence 20, Appl	Sequence 16, Appl	Sequence 22, Appl	Sequence 18, Appl	Sequence 1, Appli
US-08-833-391-61 US-09-060-610-61	PCT-US94-10151A-61	US-08-835-268-53	US-09-060-692-53 US-08-833-391-53	US-09-060-610-53	PCT-US94-10151A-53	JS-09-308-179B-2	US-08-136-922-1	US-08-556-422A-1	US-09-300-958A-24	JS-09-410-551B-20	US-09-410-551B-16	US-09-410-551B-22	US-09-410-551B-18	US-09-410-551B-1
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ALIGNMENTS

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                                                                                GENERAL INFORMATION:
APPLICANT: KIMURA, Toru et al.
APPLICANT: KIMURA, Toru et al.
TITLE OF INVENTION: NOVEL SEMAPHORIN Z AND GENE ENCODING THE SAME
FILE REPERENCE: 0220-4456P
CURRENI APPLICATION NUMBER: "5/09/377,940A
CURRENI ELINO DATE: 1998-06-05
NUMBER OF SEO ID NOS: 20
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16.0%; Score 555.4; DB 4; Length 3524; 60.0%; Pred. No. 1e-138; Live 0; Mismatches 656; Indels 27;
                                         Sequence 3, Application US/09077940A Patent No. 6576441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 60.0
Matches 1026: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: 3'UTR
LOCATION: (2706)..(3524)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: (39)..(2762)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: HOMO sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (1)..(38)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: 5'UTR
                                                                                                                                                                                                                                                                   SEQ ID NO 3
LENGTH: 3524
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RESULT 1
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252 CGGGTCAACAGGACGCTGTTCATTGGGGACAGGGACACCCTACCGCGTAGAGCTGGAG 311

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247 ACATCACACAGGAAGAATTTATTGTAGCAAAAAACTGACATGGAAATCTAGACAGGCC 306

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NAME/KEY: 5'UIR
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SENDRAL INFORMATION:
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FILE PEFERENCE: 0020-4436P
CURRENT APPLICATION NUMBER: 05/69/077,940A
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1365 AAATAGTGGTTTTCIAAATGACAGCCTTTTCCTGGAGGAGATGAGTGTTT-----A 1415
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                                                                                                                                                         TGTCTCAGSGACCACAGGGGCCCAGCATCTTTTGGAGGAGTTTSAGACCTACCGGCCAGA
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58.6%; Pred. No. 8.3e-109;
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APPLICANT: KIMURA, TOTU
APPLICANT: KIKUCHI, KAOTU
TITLE OLIVENTION: NOVEL SEMAPHORIN GENE:
FILE REFERENCE: 0020-4527P
CURRENT APPLICATION NUMBER: US/09/254,594
CURRENT FILING DATE: 1999-05-11
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN VERSION 3.0
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NAME/KEY: misc_feature
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                                                                                                                                                         GCCGCTGTGAACGACATGGGAAGTGTAAAAAAACCTGTATTGCCTCCAGAGACCCATATT 1597
                                                                                                                                                                                 GCCGGTGTGCCCCGCGTGGGGCCTGTCAGAGGAGCTGTTTGGCTTCTCAGGACCCATACT 1609
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APPLICANT: KINDRA, TOTU
APPLICANT: KINDRA, TOTU
TITLE CA TIVENTION: NOVEL SEMAPHORIN GENE: SEMAPHORIN Y
TITLE CONTINUED NOVEL SEMAPHORIN GENE: SEMAPHORIN Y
TITLE CONTINUED NOVEL SEMAPHORIN GENE: SEMAPHORIN Y
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14.3%; Score 443.6; DB 4;
Best Local Similarity 58.6%; Pred. No. 9.2e-109;
Matches 849; Conservative 0; Mismatches 584;
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OTHER INFORMATION: Tissue Type: Child Brain
MAME/KEY: 5'UT
LOCATION: (1)..(187)
OTHER INFORMATION: Identification Method: E
NAME/KEY: misc_leature
LOCATION: (188)..(297)
OTHER INFORMATION: CDS; Identification Method
OTHER INFORMATION: CDS; Identification Method
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OTHER INFORMATION: Identification Method:
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CORRENT APPLICATION NUMBER: 35/29/254,594
CURRENT FLING DATE: 295'-05-11
NUMBER OF SEQ 1D NOS: 13
SOFTWARE: PALENTIN VEXSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09254594 Patent No. 6566094 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                      GTGGAIGG 1605
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                                               356 AIGAGIGCIACAACTATATTOGTGTTCTTCCCTGGGACTCCCAGACGCTCCTTGCCT 415
                                                                                            GIGGAACTAAIGCCTTCAACCCTICCTGCAGAACTAIAAGAIGGAIACAITGGAACCAI 463
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APPLICANT: KIKUGH, KAOATU
TITLE OP INNELION: NOVEL SEMAPHORIN GENE: SEMAPHORIN
FILE REFERENCE: 0020-4527P
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CCATION: (2838)..(3195)
CTHER INFORMATION: Identification Method:
US-09-254-594-1
  1, Application US/09254594
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GENERAL INFORMATION:
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402 403 ACGAATGCTACAACTACATCCGGGTTCTTGTTGCCTGGGACTCGCAGACACTCCTTGCCT 462 ATGAGTGCCACAACTIIATTAAAGTTCTTGTAAAGAAAAACGAIGATGCATTGTTTSTCT 463 CCATCTCTGCAGAGAGATTTGTACTCAGCCACAGCAGAGATTCCAGGCCAGTGATG 642 CCTICAGGGAAATAGGAGIGGAGIATA---ACACCAIGGGAAAGGIAGITTICCCAAGAG 750 226 GGCTGGACTTICAGAGAITCCTGACCTTGAACCGGACCTTGCTTGTGGCTGCCGGGATC 285 PCGGGGATGAATTCAGGGGAATGGCCAAGATGCCCATAFGATGCCAAAGATGCCAACGTTG 523 CAGICATTIACCGGAGICITGGAGAAAGCCCTACCCIGCGGACCGICAAGCACGAIICAA 643 643 CTGFGGTTTACAGAAGCCTTGGACCTCAGCCCCCACFCGGTFCTGCAAAGTATGACTCCA 702 <u> AA1GGTTGAAAGAACCATACTTTGTTCAAGCCGTGGATTACGGAGATTATATGTTACTTCT 703</u> 224 ATATITATACTGTTGATATAGACACATCACACGGGAGGAAGAATTTATTGTAGCAAAAAC 286 ACGITTTCTCCTTCGATCTTCAAGCCCAAGAAGAAGGGGAGGGGCTGGTGCCCAACAAGT T---TCTSACATSGCGGASCCAAGACATGGAGAATTGTSCTGTCCGGGGAAAGCTGACGG GTGGAACTAATGGGTTGAAGGGTTGGTGGAAAAATAAAAGATGGATACATTGGAAGGAT 284 TGACATGGAAATCTAGACAGGCGGATGTAGACACATGCAGAATGAAGGGAAAACATAAGG 164 GGCTGGACATCCAGATGATTATGATCATGAACGGAACCCTCTACATTGCTGCTAGGGACC 18; 12.0%; Score 369.8; DB 4; Length 3195; 55.9%; Pred. No. 5.4e-89; tive 0; Mismatches 622; Indels 18; SEMAPHORIN 10CATION: ()...()
CIHER INFORMATION: Tissue Type: Hrain
NAME/KEY: 5' UTR
LOCATION: (1)...(56)
O'THER INFORMATION: Identification Method: E
NAME/KEY: misc_facture
LOCATION: (3)...(2837)
O'THER INFORMATION: CDS; Identification Method: APPLICANT: KYMURA, Toru
APPLICANT: KINUCHI, Kaoru
TITLE OF INVENTION: NOVEL SEMAPHORIN GENE: SEN
FILE REFERENCE: 0020-4527P
CURRENT APPLICATION NUMBER: 38/09/254,594
CURRENT FILING DATE: 1599-05-11
NUMBER OF SEQ ID NOS: 13
SOFTWARE: Patentin version 3.6
SEQ ID NO 1 704 õ

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.4%; Score 166; DB 1; Length 2854; 53.0%; Pred. No. 2.2e-34;
                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Eloppy disk
COMPUTER: LEM FO COMPATIOLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Parcentin Rotlease #1.0, Version #1.25
CURRAT APPLICATION NATA:
APPLICATION NUMBER: US/C8/121,7153
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NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 Bush Street, Suite 3200
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 514
ATORNY/ACRNT INPORMATION:
NAME: OSMAD, Richard A.
REGISTRATION NUMBER: 56,527
REJECOMMUTCATION INFORMATION:
TELEPHONE: (415)343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX:
INFORMATION FOR SEQ ID NO: 57:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                   13-SEP-1393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 2854 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
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es 532; Conserv
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                                                                                 STREET:
CITY: SA
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                                                                                                                                                                                                                                                                                                                                                                                         1121 CCTFAGAAAGATAGGAACTTCCAAFGAGTTCCOTGATACCCTGAACTTCAFCAAA 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160 | 1160
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                                                                                                                                                                                                                                                  881 ACATICICCAGGCAGITACAGAIGIGAATICGTATCAACGGGCGUGATGITGICCTGGCAA 940
                             761 TGGCTCAGGTTTGTANGANTGATATGGANGGATGTCAAAJAGTGGTGGAGAAAAAAAATGTGAA 320
                                                          621 OGTOGITOCTGAAGGCGCGCTTGAACTGCTCAGTTCCTGGAGAGTCTCATTTTTAA
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Bentley, David R.
O'Connor, Timothy
WENTION: The Semaphorin Gene Pamily
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GENERAL INFORMATION:
APPLICANT: Goodman, Corey S. APPLICANT: Kolodkin, Alex L. APPLICANT: Matthes, David APPLICANT: Bentley, David R.
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1657 ACTCTGGATGG 1667
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TITLE OF INVENTION:
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1411 ATGAAGTCAATACTTGAGTCATTTGATGGTCCATTTAAAGAGCAGGAAACGATGAACTCA 1470
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                                                                                                                                                                                                                                                                                       5.4%; Score 166; DB 1;
53.0%; Pred. No. 2.2e-34;
....criONE: (415)343-4341
TELEPAX: (415)343-4342
TELEX:
                                                               :NFORMATION FOR SEQ 1D NO: 5
SEQUENCE CHARACTERISTICS:
LENGIH: 2854 base pairs
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                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: double
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                                                                                  766 CAGGTITGIAAGAATGATATGGGAGGATCICAAAGAGTCCTGGAGAAAACAGTGGACOTG3 825
                                                                                                                                                           CTCCAGGCAGTTACAGATGTGATTCGTATCAACGGGCGTGATGTTGTCCTGGCAAC----
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KOLOdkin, Alex L.
APPLICANT: Matches, David
APPLICANT: Bentley, David
APPLICANT: C'CONDOT, Timetny
TITLE OF INVENTION: The Semaphorin Gene Family
CORRESPONDENCE ADDRESS:
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268 Bush Street, Suite 3200
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ATTORNEY/AGENT INFORMATION:
NAME: Osmar, Richard A.
REGISTRATION NUMBER: 35,627
REFERENC/POCKET NUMBER: B94-002-1
IELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/121,713
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; Sequence 57, Application US/08835268
; Patent No. 5807626
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IBM PC compatible.
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Kolodkin, Alex L.
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APPLICANT: GOODMAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
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                                                                769 TGCCAGAACTAGATCCGAGTCCTGGCGAAAATTGACGATGACCGGGTACTCATCTGGGGT 828
                                                                                                           ACTAATGCCTTCAACCCTTCCTGCAGAAACTATAAGAT---GGATACATTGGAACCATTC 465
                      349 IGCCACACITIATIAAAGITCTICIAAASAAAAACGATGAIGCATIGTITGTCIGGA 408
                                                                                                                                                  829 ACSAACGOCIATAAGCCACTATGTCGGCACTACGCCCTCAAGGATGCAGATTATGTTGTA 888
                                                                                                                                                                                                466 GGGGATGAATTCAGCGGAATGGCCAGATGCCCATATGATGCCAACATGCCAAGGTTGCA 525
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Patent No. 6013781
GENERAL INFORMATION:
APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
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                                                                                    ------GAATGACAGTGGTAGAC--------TICCTGATGTGTGTGATTTT 1566
                                                                                                                                1174 ATCAAGACACCACCACTGGAIGAGGCAGTGCCTCCAACTTCAACAGGCCATGGTTC 1233
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                                           | CATCC::CUTTAGAAAGATAIGCAACCTCCAAIGAGTTCCCTGAIGATACCTGAAGTTC
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                                                                                                                                                                                                                     CTGAGAACAATGGTCAGATACCGCGTTACCAAAATTGCAGTGGA 1277
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/69/060,692
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Mathres, David d.
APPLICANT: Bentley, David R.
APPLICANT: O'Connor, limethy
ITTLE OF INVENTINE: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 166; DB 2;
Pred. No. 2.2e-34;
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STREET: 260 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 894-302-1
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APPLICATION NUMBER: US/68/121,713
FILING DATE: 13-SEF-1593
ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, PICHARA A.
REGISTRATION KNMBSER: 36,627
REGISTATION KNMBSER: 36,627
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                                                                                                                                                                                                                                                                                                                                                                     Sequence 57, Application US/09060692
Patent No. 5935865
GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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SEQUENCE CHARACTERISTICS:
LENGTH: 2854 base pairs
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Similarity 53.0%;
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(415)343-4342
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CLASSIFICATION: 514
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STRANDEDNESS: doubl
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Best Local Simi
Matches 532;
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; LOCATION:
US-09-060-692-57
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994 ATGCTTGACATJGCCAGIGTTTITACTGGAGATTCAAGGAACAGAAGTCTCCTGATJCC 1053
       291 ATTCAGTCAACAAGAGCATCATTGAAGGAAATTATGGTGGTGTCAAGTGGAGAAACTCATC 1350
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                                                                          706 ITCAGGGAAATAGCAGTGGAGTATAACACCATGGGAAAGGTAGTTTCCCCAAGAGTGGCT 765
                                                                                                                                                                    766 CAGGTTISTAAGAATGATATGGGAGGATCTCAAAGAGTCCTGGAGAAACAGTGGACGTCG
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
SOFTWARE: PATENT ADDICATION DATA:
APPLICATION NUMBER: US/09/060,610
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
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APPLICANT KOLOWAN Alex L.
APPLICANT Matthes, David
APPLICANT Bentles, David
AFPLICANT COTONGY, THOOLY
ITILE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
COPRESPONDENCE ADDRESS: 100
COPRESPONDENCE ADDRESS: 100
COPRESPONDENCE ADDRESS: 100
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STREET: 268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 57, Application US/09060610 Patent No. 6344544 GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
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US-09-060-610-57
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Best Local Similarity 53.0%; Pred. No. 2.2e-34;
Matches 532; Conservative 6; Mismatches 415; Indels
                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
GURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/833,391
APPLICANT: Maithes, David
APPLICANT: Boniloy, David R.
APPLICANT: O'Connor. Timothy
TITLE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESSEE: STECHNOLOGY NAW GROUP
STREET: 268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B94-0C2-1
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PRIOR APPLICATION EATA:
APPLICATION NUMBER: US 68/121,713
F11.NC DATE: 13.55P-1953
ATTORNEY/AGENT INFORMATION:
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REPERDE/DOCKET NUMBER: B94
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 343-4341
TELEFAX: (415) 343-4342
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STRANDEDNESS: double
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451..2640
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CS-08-833-391-57
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994 ATSCTEGACATTGCCAGTGTTTTACTSGGAGATTCAAGGAACAGAAGICTCCTGATTCC 1053
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NAME: Osman, Richard A.
RECISTRATION NUMBER: 36.627
REFERENCE/DOCKET NUMBER: FP-58750-PC/RAC
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SYSTEM: PC-DOS/MS DOS
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TELEFAX: (415) 398-3249
TELEX: 910 27299 FHT UR
INFORMATION FOR SEQ 13 NO: 57:
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LENGIH: 2854 base pairs
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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PCT-US94-10151A-57
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OPERATING SYSTEM:
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FOR-US94-10151A-57
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Best Local
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53.0%; Pred. No. 2.2e-34;
Live 0; Mismatches 415; Indels
                                                      NAME: Osman, Richard A. REGISTRATION NUMBER: 36,627
REFERENCE/SOCKET NUMBER: B94-002-1
TELEPRONEULICATION INFORMATION:
TELEPRONE: (415)343-434;
APPLICATION NUMBER: 38/835,268
                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: 57
                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 2854 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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Best Local Similarity 53.09
Matches 532; Conservative
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                     FILING DATE:
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US-09-060-610-57
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471 AACTGGTTGGCAGTGCCAAGCCTTAAAGTGCCAGAAGCCAAGGCCTGGAATGTGT---- 1526
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Similarity 53.0%; Pred. No. 2.2e-34;
                                                                                                                                                                                                                                                                                                                                                      1234 CIGASAACAATGGICAGAIACCGCCTTACCAAAATIGCAGTGGA 1277
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GENERAL INFORMATION:
APPLICAT: 1Th Sequents of the University of California
IIILE OF INVENTION: The Semaphorin Gene Family
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401 TCTGTSGAACTAATGCCTTGAACCGTFCCTGCAGAACTATAASAT---GGAFACATFGG 457
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 CCACCTCTGTGCTGGCCGACAACGAACTGTATTCCGGTACCGTGGGGGATTTCAGTGGCA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               638 ATICAAAATGGTTGAAAGAACCATACTTTGTTCAAGCCGTGGATTACGGAGATTATATCT 697
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341 ASSATGAGTGCCACAACTTIATTAAAGTTCTTCTAAAGAAAAAAGGTGATGGTTTTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 AGGATGATTGTCAGAATTACATCCGCATCATGGTGGTGCCATCGCCGGTCGCTTTTCG
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51.9%; Pred. No. 4.4e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRW PC compatible
OPERATING SYSTEM: PC-505/MS-DOS
SOFTWARE: Patentin Rclease #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            401;
APPLICANT: Bentley, David R.
APPLICANT: O'Concor, Timothy
TILLS O'E INVENTION: The Semaphorin Gene Family
CORRESPONDENCE ADDRESS:
                                                                                                                                                 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                              2: SCIENCE & TECHNOLOGY LAW 268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/05/121,713D
FILING DATE: 13-SEP-1993
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: B94-002-1
TELECOMUNICATION INFORMATION:
TELEPHONE: (415)343-4341
TELEFAX: (415)343-4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NTTORNEY/AGENT INFORMATION:
NAME: Osman, Richard A.
REGISTRATION NUMBER: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGIH: 3560 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 494; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                STREET: 260 cur.
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MOLECULE TYPE: CDNA
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Best Local Similarity
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                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                          COUNTRY: US
ZIP: 94104
                                                                                                                                              ADDRESSEE:
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                                                       foccasaacracardosastecreseaaaatreacaargaceeracreteress; 828
                                                                                                                  469 ACTAATGCCTTCAACCCTTCCTGCAGAACTATAAGAT---GGATACATTGSAACCATTC 465
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Patent No. 5639856
GENERAL INFORMATION:
APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Matthes, David
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986 CCTATGACATGCTTSACATTGCCAGTGTTTTTACTGGGAGATTCAAGGAACAGAAGTCTC 1045
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                                                                                                                                                                                                                                                         Length 3560;
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                     Score 146.4; DB 1;
Pred. No. 4.4e-29;
                                                                                                                                                                                                                                                                                            0; Mismatches 401;
                                                                                                                                                                                                                                                     54.78;
54.98;
                                    59:
                                                    SEQUENCE CHARACIERISTICS:
LENGTH: 3560 base pairs
(415) 343-4342
                                                                                                                                                                                                                                                                        Best_Local Similarity 51.99
Matches 494; Conservative
                                  INFORMATION FOR SEG ID NO:
                                                                                        TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                 1..1953
                                                                                                                         MOLECULE TYPE: CONM
                                                                                                                                                                                 NAME/KEY: CDS
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US-08-835-268-59
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 926 ATGTTGTCGTGGCAACGTTTTCTACACCTTALAACAGCAFCCCTGGGTCTGCAGTCTGTG 985
                                                                       524 TTANTGAANICCAATCTGCCAGCAAICTGGTGGAAGGAAATATGGCTCGATGAGCTGGA
                                                                                                                                                                                                                                                                          986 CCTATGACATGCTTGACAFTGCCAGTGTTTTACTGGGAGGATTCAAGGAAGAAGTCTC
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                                                                                                                           TCAACATTCTCCAGGCAGTTACAGATGTGAT -----TCSTATCAACGGGGGGG
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COMPUTER: IBM PC COMPALIBIE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRETT APPLICATION DAIN:
APPLICATION NUMBER: US/38/835,268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 5807826
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: GOOGMON, Alex L.
APPLICANT: Matches, David
APPLICANT: Bentley, David
APPLICANT: Bentley, David
APPLICANT: To Connor, Timothy
TITLE CT INVENTION: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
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268 Bush Street, Suite 3200
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TELECOMMUNICATION:NFORMATION:
TELEPHONE: (415)343-4341
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FILING DATE: 13-SEP-1933
ATTORNEY/AGENT INFORMATION:
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Patent No. 5807826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Osman, Richard A. REGISTRATION NUMBER: 36,527
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PRIOR APPLICATION DATA:
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US-08-835-268-59
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                                            122 ACACGCTGGAAGGCCAGGAAGGAAGGGGGGGGTGTGGCCCGTACGATCACGATCACATCAAGT 181
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                                                                                                                                                                                                                                                                                                                    242 GCGATCCGATTATCTACCGGGAGC--------CCCTGCAGACCGAGCAGTACG 286
458 AACCATTCGGGGATGAATTCAGGGGAATGGCCAGATGCCCATATGATGCCAAACATGCCA
                                                                                                                           518 ACGITGCACTGTISCAGAIGGAAAACTATACICAGCCACAGTGACTGACTICCTIGCCA
                                                                                                                                                             ATTCAAAATGGTTGAAAGAACCATACTTTGTTCAAGCCGTGGATTACGGAGATTATATGT
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                                  LE66 TGAACTTCATCAAGACGCACCGGTCATGGATGACAGTGCCGTGCATCTTCAACAGGC 1225
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APPLICATION NUMBER: US/09/060,692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Matthes, David
APPLICANT: Bentley, David R.
APPLICANT: O'Connor, Timethy
TITLE OF INVENTION: The Semaphorin Gene Family
CORRESPONDENCE ADDRESS:
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: 268 Bush Street, Suite 3202
San Francisco
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                                                                                                                                                                                                                                                                                                                                                                              Sequence 59, Application US/09060692 Patent No. 5935865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
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APPLICATION NUMBER: US/08
FILING DATE: 13-SEP-1933
ATTORNEY/AGEN: INFORMATION:
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TELEFAX: (415) 343-4342
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LENGTH: 3560 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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CLASSIFICATION: 514
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September 30, 2003, 16:84:83 search: nime. 1972.73 10.509-886-681-1 11.427.422 Million cell 12.69pp 10.0, Gapext. 1.0 12.888711 seqs, 2045481386 residues 12.888711 seqs, 2045481386 residues 13.90pp 10.0, Gapext. 1.0 14.27.422 Million cell 28.88711 seqs, 2045481386 residues 15.90pp 10.0, Gapext. 1.0 16.90pp 10.0, Gapext. 1.0 17.90pp 10.0, Gapext. 1.0 18.90pp 10.0 18.90pp) 15 15 15	Statem training swimpeden
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ACCAAAATTGCAGTGGACACAGCTGCTGGGCCATATCAGAATCACACTGTGGTTTTTCTG 1320 GGATCAGAAAGGGAATCATCTTGAAGTTTTTGGCCAGAATAGGAATAGTGGTTTTCTA 1380 AAIGACAGCCTTTCCTGGAGGAGATGAGTTTACAACTCTGAAAAATGCAGCTATGAT 1440 GTTGCGTTCTCTACCTGTGTGATAAAGGTTCCCCTTGGCCGGTGTGAACGACATGGGAAG 1560 GCAGTGTCTTCCCATAATCACCAAGACAAGAAGGGAGTGATTCGGGAAAGTTACCTCAAA 1920 GGCCACGACCAGCTSGTTCCCGTCACCCTCTTGGCCATTGCAGTCATCCTGGCTTTCGTC 1980 ATGGGGGCCTTTTTCTCGGGCATCACCGTCTTCTGTCATCATCACGCGCAAAGAC 2040 GATSTGATTSGTATCAACGGSCGTGATGTTGTCCTGGCAACGTTTTCTACACCTTATAAC 1617 :031 GTTCCTAAGCCCAGGCCAGGTTGCTGTTGGTGGCTCATCCTCCTTAGAAAGATATGCAACC 1140 1858 GCAGTGCCCTCCATCTTCAACAGGCCATGGTTCCTGAGAACAATGGTCAGATACCGCCTT 1917 GCCTGCAGCCATTTALCACCCAACAGCAGAGTGACTTTTGAGCGAGGACATAGAGCGTGGC GCAGTGCCCTCCATCTTCAACAGGCCATGGTTCCTGAGAACAATGGTCAGATACCGCCTT GOGAGATTCAAGGAACAGAAGTCTGCTGATTCCACCTGGACACCAGTTCCTGATGAAGGA 1738 (.021 120:

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GWARCTWINSKINDSCHIRT AT ULING THE TOTAL TO
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Siretrmann.A., Lutz,B., Gortler,F. and Behl,C.
Submitted (19-30n.2000) Independent Rescarch Group
Neurodegeneration, MPI of Psychiatry, Kraepelinstrasse 2-10, Munich
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EKLESSKSPWINGVNLVRNLDSI.PPKVPQREASI.GPPGASLSQTGLKKLEMHHSSSYGV
DYKRYPTNSLIRGHQATTLKRNNFNSSNSHLSRNGSFGRGDNPPFAPQRVDSIQVH
SSQPSGQAVTVSRQPSI.NAYNSLIRGSLKRTPSLKPDVPPRPSFPAFSRNDSFOV
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kpgrnytorhrldigmimimngtlytaardhiytvdidtshteelycskklywksrga
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoslomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 3862)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klostermann, A., Lutz, B., Gertler, F. and Behl, C. The orthologous human and murine semaphorin 6-1 proteins (SEMA6A-1/Sema6A-1) bind to the enabled/vasodilator-stimulated phosphoprotein-like protein (EVL) via a novel carboxyl-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ATGAGGTCAGAAGCCTTGCTGCTATATTTCACACTGCTACACTTTGCTGGGGCTGGTTTC
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                                                                                                                                                                             3862 bp. mkNA linear
Homo sapiens semaphorin SEMA6Al mRNA, complete cds.
AF279656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chem. 275 (50), 39647-39653 (2000)
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/protein_id="AAG29378.1"
/db_xref="GI:11093651"
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/db_xref="taxon:9606"
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1620 2277 2457 2517 1920 2577 TIGGCCATIGCAGTCATCCTGGCTTCGTC 1980 2697 2160 GACCTGACGGCCTCCCCACCCGGAGTCA 2280 TCCTGAGAACAATGGTCAGATACCGCCTT 1260 TCCTTTCIGGCACTGAATGGGCATICCAGT 1740 TACTGCGTCTGTGATCATCGGCCCAAAGAC 2040 HILLILLILLILLILLILLILLILLILLILLI GACACTCAATCCAAAGACCCAAAGCCGGAG 2817 AAGCICGCCACTCCCGGCAACACGGCCAAG 2220 PECTSAGAACAATGGTSAGATACCGCCTT 1917 FIGGCCAGAATAGGAAATAGTGGTTTTCTA 1380 FIGECCAGAATAGGAAATAGTTTTCTA 2037 STITACAACTCTGAAAATGCAGCTATGAT 1440 SCCCTTGGCCGGTGTGACGACATGGCAAG 1550 ICGACGGCTCAAGAGGGGTATGAGTCTAGG 1800 SACTCACCTGACAGCACAGACCCTTTGGGG 1860 CCATATTGTGGATGGATAAAGGAAGGTGGT ACTCACCTGACAGGACAGACCCTTTGGGG AGGGAGIGATTCGGGAAAGTACCTCAAA TACTGOGTCTGTGATCATCGGCGCAAAGAC GACACTCAATCCAAAGACCCAAAGCCGGAG AAGGGAGTGATTCGGGAAASTTACCTCAAA

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VIKVPLANTGNSCFLUNDLELEDRENGYVANEEKCSTBOKORDLSPNSRLIFBODIBEGNIDG
KAGDINNSYNALNDISTPLPONBEMSYNYVGHSSSLLSSTTASSTAGESTERGENID
KARLLDSPDSYDPLGANSSHHNQDKKGVIRESSYLKGHDOLVPYTLLAIAVILAFVWGA
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NQNLTNACTKUMPPMGSPV1PTDLPLRASPSH1PSVVVLPTTQQGYQHEYVDQPKMSE
                                                                                                                                                          Ohara,O., Naqase,T. and Kikuno,R.
Direct Submission
Submitted (31-JAN-2000) Osamu Ohara, Kazusa DNA Research Institute.
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292-0812, Japan (E-mail:cdnainfo@kazusa.or.jp,
URL:http://www.kazusa.or.jp/huqe/, Tei:+81-438-52-3913,
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/noter"Start codon is not identified.
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1. .4250
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98.4%; Pred. No. G;
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/db_xref="G1:7243117"
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/db_xref="taxon:9606"
/clone="fj03125"
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1. .4250
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Matches 3093; Conservative
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Primates: Catarrbini; Homicidae: Homo.
                                                                                                                                                          2881 AGCAAGAGTCCCAACCATGGGGTGAACCTTGTGGAGAACCTGGACAGACTGGCCCCAAA | HTT. 
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. 40	<u>. ਜ</u>	1321 GGAICAGGAAGGGAAICAICHTGAASTHTTTGGCGGAAATAGGAAATAGTGGIIITCIA 1380 	දුරු සූ
330 ATCAATGCCTGCAAAAAAAAAAAAAAAAAAAAAAAAAAA	ed 2	(°) (°)	qa
2290 CTGCAGCAGAAGCGGAAGCCCAGCGGGGGCAGCCC 1111111111	Å €	ACCAAAATTGGAGTGGACAGGGGGGGGGGGGATATCAGAATCAGAGTGTGGTTTTTCTG 13	٥y
230 AAAGCAGACCACCACCTGGACC	5 4g	TT 12	QA
2476 ACGCCACTCATGCACAAGGCCAGCTCGCCACTCGCCACTCGCCACTCATGAGAGAGCAAGGCAGAGAGAG	dc .c	1.41 FOCAM SAGITACCIONIGATAM CITAMINAGACCHACCOCTOXIOGATRAG 1200 [HIII-HIII-HIII-HIII-HIII-HIII-HIII-HII	AG GG
(2)	ô	GIICCTAASCCCASGCCAGSTIGCISTGCTSGCTCAIGCTIAGAAAGAFAIGGAACC 13	qa
2110 AAGCTCAGCGGGCTCTTTGGGGACACTCAATCCA 	5 g	GTTCCTAAGCCCAGCCAGGTTGTTGTTGTGGTGGTCATCTTTGTTGCAACC 11	Ċ.
	7 <u>2</u>	1021 GGSAGATTCAAGGAACAGAASICTCCIGATICCACCIGGACAGTCCTGATGAACA 1080 1110 HTH THE HILLSHILLSHILLHI HILL HILLHI HILLHI HILLHI HILL 1270 GGGAGATTCAAGGAACAGAGICTCCTGATTCCACTSSACACTAGTTCCTGATGAACGA 1323	qa Xo
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	G 6	661 TACTITGTTCAAGCCGIGGAFIACGGAGAITATATCTTCITCTTCTTCAGGGAATAGGA 720 	ço G
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21 GCC16GACCATTATCACCAAAAA 70 GCC1GCAGCCATTATCACCCAACCAACCAACCAACCAACCAACC	Š 8	541 AAACTATACTCAGCCACAGISACTGACTTGCTTGCCATTGAGGGAGTCATTTACGGAGT 600 (1111111111111111111111111111111111	Qy
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01.0 0.02 0.03	λ â	CATTOGACCATTCGGGG (GAATTCAGC) CATTOGACCATTCGGGGTSAATTCAGC) CATTCGACCATTCGGGGTSAATTCAGC)	do ov
41 GGAGICGAAG 	े 	361 ATTANAGORANAGORANAGORIGATICOTTOTTOTTOTOTGAGORACTANTGCCTTC 420 CHT 1	Qy Db
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CTGGACAGAGCAGCTCTCTGTAT 1500 1680 1726 2169 1989 2109 2469 2169 2529 2289 GTGGTGGTCCTGCCCATCACGCAGCAG 2469 GAGGGGTATGAGTCTAGGGGAGGAATG 1809 COCCEGGGCTCCATGASCAGCGTCACC AAAGACCCAAAGCSGAGGCCATCCTC HELLITTE FILLE FILLIFER TO STREET GAGGGGTATGAGTCTAGGGGAGGAATG GICALCCIGGCTIICGTCALGGGGGCC CTCCCCACCCAGAGTCAACCCCAACG CGCGAGTGGGAGGAACCAGAACCTC GGCTCCCCTGTGATTCCCACGGACCTG ACTITIGAGCAGGACATAGAGCGTGGC ITIGIGGCACIGA TATTGIGGATGGATAAAGGAAGGIGGT

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C12P21/32,C12C1/68//C12P21/08,G06F17/36,C12N15/00,C12N5/C0 CC cser for synthesizing full-length cDNA and use thereof FH Key
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[ Jases 1 to 6669, Primates, Catarrhi,; Hominidae, Home.

Ota, 1. Jsoqai, 1. Mishikawa, 1. Hayashi, K., Saito, K., Yanamoto, J., Ishii, S., Sugiyana, T., Wakamatsu, A., Nugai, K. and Otsuki, T. Primer for synthesizing full-length cDNA and use thereof Patent: JP 2002197363 A 15564 09-JUL-2002;

HELIX RESEARCH INSTITUTE
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                                                                                                                  756 AAGAGIGGOIGAGGIIIGIAAGAAIGAIAIGGGAGGAIGIGAAAGAGICCIGGAGAAACA
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Direct Submission
Submitted (10-MAY-2001) Takao Isoqui, Helix Research fustitute.
Submitted (10-MAY-2001) Takao Isoqui, Helix Research fustitute.
Genomics Laboratory: 1532 3 Yana, Kisatazu, Chiba 252-0612, Dapan (E-mail:genomicsEril-co.jp, Tel:61-438-52-3986)
Bedomics Carlor (10-16) Tel:61-438-52-3986)
Bedomics Carlor (10-16) Tel:61-438-52-3986)
Bedomics Carlor (10-16) Tel:61-438-52-3986)
Bedomics Trade and Inclury of Capan, CDNA full Elsert Sequencing.
Search Association for Biotechnology: CDNA library construction, 5'-6 3'-ond one pass Sequencing and Clone Selection: Helix and Clone Department of Virtlogy, institute of Medical Science,
                                               PRI 01-AUG-2002
highly similar
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| (bases 1 to 3018) | Klostermann, A., Lutz, B., Gertler, F. and Behl, C. | The orthologous human and marine semaphorin 6A-1 proteins | (SEM46A-1/Sema6A-1) bind to the enabled/vasodilator-stimulated | phosphoprotein-18ke protein (FVL) via a novel carboxyl-terminal | Zyxin-11ke domain

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LKARLINCSV-GODSHFYFNILOANTDVIRI INGBDVVLATFSTPYNSI PGSAVCAYDHLD
IADVFTGREKEÇKSPOSTHYPPYDERAYRERGENGSSSLEKYAI SNEEPDOYTURI
KTHELUDENAVPSI INRPWELRTWYRYLLIK INVDNAAGPYONHTVY FLEEPDOYTURI
KTHELUDENAVPSI INRPWELRTWYRYLLIK INVDNAAGPYONHTVY FLEEPNYYN DEK
CSYDGVEDKRIMGMOLDRASGSLYVAFFSTOVI KVPLGRCERHGKCK KTCIASRDFYGG
WVRESGSCAHLSPLSKLTFEDOITERGWNDGIGGCHNSPYALNHTSDSA
SROGYESRGGHLDWNDLLEAFGSTDELGAVSSHNHOOKKGITRESTLKSNDGVVYTL
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FGDYGSKOPKPREAIJFPLMINGKLATSSNTARMLIKADCHHLDLTALPPPESTPFLQQ
KRKNNGSBEWERNON I INACTKOMPPROSTY IPTDLERASESHIPSWYLD TTQQG
YQHEYVUQPKKKSEVEVAQMALEDOAATLERYKTKHELSKSPNHOVNUVENLOSLPFKV
PQREASIGPPGTSI.SGYGLESKLEMOHSSSYCLESKRSPNHOVNUVENLOSLPFKV
PQREASIGPPGTSI.SGYGLESKLEMOHSSSYCLESKRSPYPTIARNI
NSSNSSHLSRNGSFORDPPAPQRVDSIGVHSSOPSGGAVTVSRQPSLANAVNSLTR

SGLKRIPSLKPDVPPKPSFAPLSTSMKPNDACT"

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/codon_start-1

Submitted (21-JUL-2000) Independent Research Group Neurodegeneration, MPI of Psychianty, Kraepelinstrasse 2-10, Munich

2 (bases 1 to 3018) Klostermann, A. and Behl, C. Direct Submission 1. .3018
Acquaisa "Mus musculus"
Acol_typo="makA"
Acol_typo="taxon:10090"
Also:ellypo="brain"
1. .3018

Location/Cualifiers

80804, Germany

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61 CCAGAAGAIICTGASCCAATCASTATTTGGCATGGCAACTATACAAAACAGTATCCGGTG 120
                                                                                                                                                                             121 ITTGTGGGGGAGAGAGAGGAGGAGGACACACACAGAGGCACAGGCTGGACATCCAGATG 180
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                                                                         61 CCASAAGATFCCGAGCCAATCAGTATTTCGCATGCCAACTATACAAAACAGTATCCGGTG
                                                                                                                                                                                              ATTATGATGATGAAGGSAACCCTCTACATTGGTGCTAGGGACCATATTTATACTGTTGAT
                                                                                                                                                                                                                                                      1 ATGAGGTCAGAAGCCTTGCTGCTATATTTCACACTGCTACACTTTGCTGGGGCTGGTTTC
Length 3018;
78.1%; Score 2414.6; DB 10; Lengt
87.3%; Pred. No. 6;
tive 0; Mismatches 312; Indels
                               Conservative
                 Similarity
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AFZEWOGG 5013 tp TRNA linear ROD 11-DEC-2000 Mus musculus axon guidance stanal SEMAÑA: mRNA, complete rds. AF288666

Mus musculus (house mouse) Mus musculus

ORGANISM

SOURCE

AF288666.1 GI:11093308

DEFINITION ACCESSION VERSION KEYWORDS

RESULT 8 AF288666 LOCUS

0 0b 1313 0 07 1441 0 0b 1363 0 0	0y 1501 GTBCGTFCTCTACTTGTATAAGGT 1425 GTBCGTTCTACTTGTGTGTTGTTGTTGTGTGTGTGTGTGTGTG	0.5 1621 0.5 1621 0.5 1543	100 100	Oy 380 US 172 Oy 186	UV 1921 25 1843	0y 1981 AIGGGGCCGTCTICTCGGGCATCACCGT	0 QY 2101 0 Db 2023 0 QY 2161	Db 2083 Qy 2222 Db 2143	Cy 226 Pb 226 Cy 234 (b) 226 Oy 240	2 28.3 0 0y 2461
301 CAGGCCGATGTAGACAATGAGAATGAAGGAAAAGATAAGGATGAGTGCCACAACTTT 360 [1111 11 11 11 11 11 11	421 AACCCTTCCTGCAGAAACTATAAGATGGATACATTGGAACCATTGGGGGTGAATTCAGC 489 11:	OMNIGOCOMO CONTRA CONTRA CONTRA CANCOLO CONTRA CONT	601 CIIGGAGAAAGCCIACCCGGGGGCCGICAAGCAGACGAITGAAAIGGGTGAAAGAACCA 660 1115 115 1	GTGGAGPATAACACCA GGGAAAGGTAGTTTTCCCAAGAGTGGTTCAGGTTTGTAACAA. GTAGAATACAACACTA GGGAAAGGTTGTTTCCCTAGGGTTCAGGTTTGTAACAA. GAAATAGGAGGACTCAAAGGTTGTTTCCCTAGGGTGGTTGTAAGAA. GAAATGGGAGGTCTCAAAGATGTTGTGAAAACAGGTGGACGTGGTGGTTGTGAAGGGCGGGGGAAAAGATGGAAAAAGAAAAGAAAAAAAA	78. GACATGGAGGAGGAGGAGGAGGAAACAAGGAGGAATGATTIGTUTTITTITTITTITTITTITTITTITTITTITTITTITT	GATGTGATICGTAICGAGGGGGGGTGAIGTIGFCCTGGCAAGGTTTCTACACGTAIAACGGGGGGGGGTGATGTGTGTGTGTGTGTGTGTGTGTGT	AGCATCCCAGGTLCTGCAGTCCGTATGAGATGCTTGAGATGCTGGAGTTTTTGAGT 1 GGGAGATTGCAGGTCTTGAGAGAGAGATGCTGGATGCTTGAGAGAGA			3
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1740 2040 1620 2340 1482 1680 1602 1662 1800 1722 1860 1782 1980 1902 2100 2022 2160 2082 222C 2142 2280 2322 WORDAGATCCCCAGCGTGGTGGTCCTGCCCATC 2460 1542 IL IL II II II II IIIII IIIII IIIIIIII I STGTATTGTGTGTGGGTCACCGGGGGGAAAAAA 1962 TICCCCTTGGCCGGTGTGAACGACATGGGAAG 1560 ACATGCCCCCCATGGGCTCCCCTGTGATTCCC 2400 TTGACTCACCTGACAGCACAGACCCTTTGGGG GGGGGCACTCAATCCAAAGACCCAAAGCCGGAG 3GCAAGCTCGCCACTCCCGGCAACACGCCAAG ATTCCTTTGTGGCACTGAATGGGCATTCCAGT THETTIGGCCATTGCAGTCATCCTGGCTTTCGTC STOTACTGCGTCTSTGATCATCGGCGCAAAGAC SHIFF, FIRTIELL FILL FILLS AND SAGCTCACTCGCGTCGGCGATCTATGAGC GCAAGCTGGCCACGTCTAGCAACACCGCCAAG TEGACCTGACGGCCCTCCCCACCCCAGAGTCA CCAGCCGCGCAGCCGCGAGTGGGAGAGGAAC IGCAGCIGGACAGGAAGCAGCTCTCIGTAT BATTCGACGCTCAAGAGGGCTATGAGTCTAGG HILLE ELLIE TELLETTENGEN SATTCGGCATACGGGTATGAGTCTAGG SAGCICACCCACTCGCCCCGGGGCTCCATGAGC GACTGACTTTGAGCAGACATAGAGGGTGGC

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Sisogal, T. and Clauki, T.

Submitted (10-May-2001) Takao Isogai, Helix Research Institute,
Submitted (10-May-2001) Takao Isogai, Helix Research Institute,
Submitted (10-May-2001) Takao Isogai, Chiba 292-0812, Japan
Seronnics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
(E-mail:genomics*hri.oo.jp, Tel:81-438-52-3975, Pax:81-438-52-3986)
NEDO human cDNA sequencing project supported by Ministry of
Economy, Trade and Indistry of Japan, CDNA full insert sequencing;
Research Association for Biotechnology; cDNA library construction,
5 - & 3 - end one pass sequencing and clone selection; Helix
Research Institute (supported by Japan Rey Technology Center etc.)
and Department of Virology, Institute of Medical Science,
Jniversity of Tokyo.
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ERYATSNEFPDDTLNFIKTHPLMDEAVPSIFNRPWFLRTWVRYRLTKIAVDTAAGPYQ
N#TVVFLGSEKGIILKFLARIGNSGFLNDSLFLEEMSVYNSEKCSYGGVFDKRLMGMQ
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Catarrhini; Hominidae, Homo.
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TOGAGGCAGCCCAGCCTCAACGCCTACAACTCACTGACAAGGTCGGGGGCTGAAGCGTACG
                                                                                                                                                                                                                                                     3010 CCCTCSCTAAAGCCGGACGTACCCCCCAAACCATCCTTTGCTCCCTTTCCACATCCAIG
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Homo sapiens cDNA FLJ14595 fis, close NT2RM40C2194,
to Mus muscylus semaphorin VIa mRNA.
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Homo sapiers (human)
Homo sapiens
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KEHLSSESSPYVIKOFSEAFNRGGIILSVAVE"
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Zhou, L., White, F.A., Jentz, S.I., Wright, D.E., Fisher, D.A. and Saider, W.D.
Cloning and expression of a novel murine semaphorin with structural similarity to insert semaphorin I
Mol. Coll. Neurosci. 9 (1), 26-41 (1997)
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DCHNSFVALNGHASSLYPSTTTSDSASRDGYESKGGMLDWNDJLEAPGSTDPLGAVSS
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Mammalia, Eutheria, Rodentia, Sciurognathi; Muridae, Murinae, Mus.
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Submitted (17-0CT-1997) Neurology, Washington University,
Euclid Ave., St. Louis, MO 65119, USA
Location/Qualifiers
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/mol_type="mkNa"
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/close_lib="ms10 cDNA library"
74. 2749
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Query Match

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Query Match 59.0%: Score 1824.4; DB 6: Length 2293; Best Local Similarity 99.9%: Prod. No. 0; Matches 1825; Conservative 0; Mismatches 1: Indels 0; Gaps	SCTGCTGGGCCATATCAGAATCACACTGTGGTTTTTCTGGGATC 	1328 AGAAGGAATCATCTTGAAGTTTTTGGCCAGAATAGGAAATAGTGGTTTTCTAAATGACA 1387 	GCCTTTICCTGGAGGAGATGAGTGTJACAACTCTGAAAAATGCAOCTAIGATGGAOTTC	1448 AAGACAAAAGGATCATGGGCATGCAGCAGAGAGAGAGAGCTCTCTGTATGTGGGT 1507 HELL HILLETHILE HELLETHILE HELLETHILE HELLETHILETHILETHILETHILETHILETHILETHILE		1568 AAACCTGTATGCCTGGAGAGACCCATATTGTGGATGGATAAGGAAGG	1628 GCCATTATCACCCAACAGCACTGACTTTGAGGAGGACATAGAGGGAGG	17	1748 ISCOCAGGACAGACAGAGATTCGAGGGCTGAGGGGGTCTAGGGGGGGAA 1807 CITTLE THE THE THE THE THE THE THE THE THE TH	1808 IGCTGGACIGGAAGCATCT3CIIGACTCACCAGCACCACCCTTTGGGGGCACICT 1867 [1988 CCGICITCICGGGCAICACCGICIACIGCGTCTGTGAICGCGGAAAGACGIGGCTG 2047 1111 HILLIHILL HILLIHILL HILLIHILL HILL HI	2048 TGGTGCAGCGAAGGAAGGGCTCACCOATTCGCCCGGGGCTCCALGAGGCGTCA 2107 (HTH) HTH) HTH) HTH) HTH) HTH) HTH) HTH	2108 CCAAGCTCAGCGCCTCTTGGGGACACTCAAAGACGCAAAGCCGGGGGCATCC 2167 11111111111111111111111111111111111	2168 TCACGCCACTCATGCACAGCGCAAGCTCGCCACTCCCGGCAACAGGCCAAGATGCTCA 2227 HTHILLHILLHILLHILLHILLHILLHILLHILLHILLHI	2228 TTAAAQCAGACAGCACCAGGCTGACGCCCTCCCCACCCGAGAGTCAACCCCA 2287 [[[[[]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]
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Submitted (10-KMY-2001) Takao Isoaal, Belix Research Institute.
Submitted (10-KMY-2001) Takao Isoaal, Ghiba 292-0812, Japan Genails abbratery; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan 1900 human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; DNA full insert sequencing:

Solution of Sacrata and Sequencing and Clone selection: Helix Research Institute (Supported by Japan Key Technology Center etc.) and Opeartment of Virology, Institute of Medical Science, University of Tokyo.
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Suguwara,M., Takahashi,M., Chiba,Y., Ishida,S., Murakawa,K., Ono,Y., Takiguchi,S., Watanabe,S., Kimura,K., Murakami,K., Ishii,S., Kawai,Y., Salic,K., Yanamcto,J., Wakamatsu,A., Wakamatsu,A., Wagahari,K., Masuho,Y., Ninomiya,K. and Iwayanag,J. URDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2293;
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full-length CONA and use thereof.
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Mammalia; Eutheria: Primatos: Catarrhini; Hominidae; Homo.
1 (bases 1 to 2227)
Ota 7., Nishikawa,T., Isogal,T., Bayashi,K., Ishii,S., Kawai,Y.,
Wakamatsu,A., Sugiyama,T., Naqai,K., Kojima,S., Otsuki,T. and
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PP 07-JUL-2000 JP 2000253172
PI TOSHIO OTA,TETSUD NISHERAWA,TAKAD ISOGAL,KGJI HAYASHI,SP PI ISHII.
PI YURI KAWAL,AI WAXAMAISU,TOMOYASU SUGIYAMA,KEIICHI NAGAL,SHINCHI KOJIMA,
PI TETSUJI OTSUKI,HISASHI KOGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YURI KAWAL'AI WAXAMAISU,TOMOYASU SUGIYAMA,KEIICHI NAGAI,
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ADCHHIJLTALFTPSTPTLGGKRAFSRGSRENERNONLINGTKOMPPMGSPVIPTD
LPI.RASPSHIPSVVVLPTTGGGYQHEYVDGPRMSEVAGMALEDGAATLEYKTIKEHLS
SKSPHGYVNIVLVBNILDSLPSFYDQREASLGPPCARSILGMTGKSTLEMHESSYGYDTKR
SYPTNSLTRSHQATTKRNYNSSNSSHLSRNQSFGRGDSPPRADRYDYRR
SYPTNSLTRSHQATTKRNYNSSNSSHLSRNQSFGRGDSPPRADRYDSIQVHSSQP
SGGAV;VSROPSLMAYNSLTRSGIKRTPSIKPDVPPKFSFAPLSTSMKPNDACT"
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Direct Submitssion
Submitted (25-MAK-2502) Takao Isogai, Helix Research Institute,
Submitted (25-MAK-2502) Takao Isogai, Helix Research Institute,
Genemics Haborancry, 552-3 Yana, Kisarazu, Chiba 292-0812, Japan
(5-mail; qenomicsfhri.cc.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
NEDO human ciwa sequencing project supported by Ministry of
Economy, Trade and Indistry of Japan; CDNA full insert sequencing:
Research Association for Biotechnology; cDNA ilbrary construction:
Institute of Medical Schence, University of Tokyo, Laboratory of
Genome Structure, Human Genome Center; CDNA 5- 6 3'-end one pass
sequencing and clone selection: Helix Research Institute (supported
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351 STATPVPDERVPRPRPGCGASSSLERYATSNEFFDDTUNFIXTHPUMDEAVPS[FMRPW 410] 140 SAWLAVPSLKVPEPRPGGCVNDSRTLPDVSVNFVXSHTJMDEAVPS[FMRPW 410] 27 411 FLRIMVRYRLTKIAND AASPVONHTVPTGSENGHTLMFLARIGNSGELN	סטטס פאבוי	VACCESSION: B49423 VACCESSION: B49423 Status: preliminary, nucleic acid sequence not shown; not compared with conceptual trajectors: preliminary, nucleic acid sequence not shown; not compared with conceptual trajectors: Lefe < KCL> VCTOSS-references: GB:L26382 VGTOSS-references: GB:L26382 Gene: Semal Cross-references: FlyBase:FBgn0011259	Query Match Best Local Similarity 35.6%; Pred. No. 1.36-50; Matches 208; Conservative 93; Mismatches 193; Indels 96; Gaps 20;	y 114 KDECHNEIKVLLKKNUDALFVOGTNAFNPSCRNYKMDTLEPFGDEFSGNARCPYDA :69 1 EDDCQNYIRIMVVPSPGRLFVOGTNSFRPMCNTVIISDSNYTLEATKNGQAVCPYDP 57 170 KHANVALFADGKLYSATVFDFLAIDAVIYRSUGBSPTLRTVKHDSKWLKEPYFVQAVDYG 229 1 1	230 DYTYPPREMARYNYMMAKYVPRYADOKKUMASSONJEKOMISFLAARLAGSVPGOS 		y 346 QKSPDSTWTPVPDERVPREPROCCAGSSSLERYATSNBFPDDTJNFIKTHPLMDEAVPSI 405 1 1 1 1 1 1 1 1 1	y 406 FNREWELETWURYBLIKLAVDTAAGBYONHTVVELGSBKGILLKEL-ARIGNSGFL 460 1	461 NUSTRUBERSVYNSERCSYDGVEDXKLM-GMOLDRASSSLYVARSTOVIXVPLG

Cy 620 GAVSSHWHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFVMGAVESGIPL 572 Cy 620 GAVSSHWHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFVMGAVFSGITVY 671 ED 573 IKTGLDDBSDCDPV-SENSIGGGAVRQQLVIYTAGTLHIVVVVVSIVGLESMIYSGLSVF 631 CY 672 CVCDHRRKDVAVVORKEKELTHSRRGSMS-SVTKLSGLEGDTQSKDFRPREALLTPL 726 ED 632 AKFHSSBQYPEAPFIEGHNHLERLSANQTGYLTPRANKAVNLVVKVSSSTPRPKKDNLDV 691 CY 727 MHNGKLAIPSGYTAKM 741 ED 692 SKOLNIASDGTLQKI 706	RESULT 5 148747 Sepationin D - mouse Cypedionin D - mouse Cypedionin Wus musculus (house mouse) Cypedionin 1496 #sequence_revision 02-Jul-1996 #text_change 24-Sep-1999 Cypedionin 149747 Ryboschel, A.W., Adams, R.H.; Betz, H. Neuron 14, 941-948, 1995 A.Tutle: Wurine semaphorin D/Collapsin is a member of a diverse gone family and creates A.Nocession: 148747 A.Nocession: 148747 A.Status: preliminary; translated from GB/EMBL/DDBJ	PIDN: CAA59985.1; PII	Grafy March Graf Smilarity 34.3%; Score 446; Marches 200; Conservative 85; Mismatches 225; Indels 73; Gaps 16: Oy 47 GRNTTORHRUDIQMIXIMOT	Cy 84 SHTEELYCSKKLTWKSRCADVDTCAMKGKH-KDECHNFIKVLLKKNDDALFVCGTNAFNP 142 CD 83VNIKDFQKIVWPVSYTRRDECKWAGKDILKECANFIKVLEANNOTHLYACGTGAFHP 139 Cy 143 SCRNYKMDTLEFPGDEFSGMARCPYDAKHANVALFADGKLYSATVTDFLAIDA 195 CD 140 CTY1EVGHPEDNIFKLQDSHFENGRKSPYDPKLLTASLLIDGELYSGTAADFMGRDF 199	2y 136 VIYRSLGESPTLATVKHOSKWLKEDYEVQAVDYGOXIYFFFREIAVEYNTMGK 248	Cy 305 INGRDVULATESTPYNSIPGSAVCAYDXILDIASVFTGREKEGKSPDSTWTPVPDER 360 1 1 1 1 1 1 1 1 1
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Chacession: UG5928
Elimental John Public Park J. McPherson, UD.; Cverhauser, J.; Lovett, M. B.; Simmons B.; Days Res. Commun. 242, 685-691, 1998
A.Title: Nolecular cloning and mapping of himan semaphorin F from the Cri-du-char A.Reference mucher: UG5928, MUID:9612554; PMID:9464278
A.Reference mucher: UG5928, MUID:96125554; PMID:9464278
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                                                                                                                                                                                                                                                       A)Rosidues: 1-1074 cSIM>
A)Cross-references: GS:UZ840; MID:gZ772583; PIDN:AAC09473.1; PID:gZ772584
A)Experimental source: brain
C)Comment: This protein disrupts normal brain development and leads to some offenetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487 IMGWQLDRASSSLYVAFSTOVIKVPLGROBRHGKOKKTOIASRDPYCGWIKEGGACSHIS
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--EPTTISAMELSIKQQQLYIGSTAGVAQLPLHRCDIYGKACAECCIARDPYCAW--DGS 540
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244 YPFFRENAIDGEHTGKATHARIGGICKNDFGG-HRSDYNKWTTFLKARLICSVPGPWGID 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               289 SHFYFNILQAVTDVIRINGRD-----VVLATFSTPYNSIPGSAVCAYDMLDIASVFTGRFK 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         527 CCLARDPYCAW--DGSSCSRYFPTAKRATRRCDIRNG--DFLTHCSD----LQHHDN--- 675
                                                                                                                                                                                                                                                                                                                   37-Api-1994 #fext_change 24-Sep 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   525 CIASRDFYCGWIKEGGACSHLSPNS ALTFEQDIERGNTDGLGDCHNSFVALNGHSSSLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68 LYIAARDHIYTVOIDISHIBBIYOSKKLIWKSRQADVDICRMKGKH-KDECHNFIKVLLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69 LYVGÅKDHIFSFNL---- VNIKBYQKIVMPVSHSRRDECKWAGKDILRECANFIKVLKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE-----DELCOVELYNSKOPKNPIVYGVFTTSSNIFKGSAVCMYSMIDVRRVFLGPYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345 EQKSPOSTWTPVPDERVPKPRPGCCAGSSSLERYATGKEFPODTLNFIKTHPLMOEAVPS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KNDDALFVCGTNAFNPSCR----NYMMDTLEPFGDEF--SGMARCPYDAMHANVALFAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405 IFNRPWFLRTMVRYRLTKIAVDTAAGPYQNHTVVFIGSEKGIILKFLARIGNSGFLNDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----EPTVISAMKISTKQQQLYIGSATGVSQLPLHRCDVYSKACAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Status: preliminary, not compared with conceptual translation, Molecule type: mRNA, Residues: 1-772 < LUO>
(Cross-references: GB:U02528, MD:g410078, PIDN:AAG59638.1, PID:g410079)
                                                                                                                                                                                                                                ollapsin - chicken
(Species: Gallus gallus (chicken)
(Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #froxt_change 24-5e
(Accession: A4966)
(Ann. Y., Raible, D.)
(Ann. Y., Raible, D.)
(Ann. Y., Raible, D.)
(Ann. Collapsion: A9969) MulD:94605554, FXID:8402908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cuery Match
Best Local Similarity 35.2%; Pred. No. 4.1e-49;
Matches 198; Conservative 87; Mismatches 220; Indels 57
                                                                                                                 SCSRYFFTAKRRTRRODIANG--OPLTHOSOLBDNHHOPSL 581
                                                              541 ACSHLSPWS-RITFEODIBRGNTJGLGDCHNSFVALNGHSSSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PSTTTSDSTAGEGYESRSGMLD 605
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emaphorin F precursor - human , Species: Homo sapiens (man)

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99
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Clibtespecies: Was musculus inouse mouse)
Clibte: 26-Uul-1996 #sequence_rovision 26-Gul-1996 #text_change 24-Sep-1999
Clibtespecinn: 199169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 ECHNFIKVIJKKNDDALFVCGTNAPNPSCR----NYKMDTLBPF3DEF--SGMARCPYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169 AKHANVALFADGKLYSATVTDFLAIDAVIXRSLGESPTLRTVKHDSKMLKEPYFVQA---
                                                                                                                                                                                                                    176 LFADGKLYSATVTJFLAIDAVIYRSIGESPTIRTVKHJSKWLKEPYFVQAV-----DY
                                                                                                                                                                                                                                                                                                         238 DDKIYPPPRESAVEAAPAMGRMSVSRVGQICRNDLGG-QRSLVNKWTTFLKARLVCSVPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    297 VEGDIHF-----DÇLÇDVFLLSSRDRÇTPLLYAVFSTSSGVFQGSAVCVYSMNDVRRAFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AVPSIENRPMFLRTMVRYRLTKIAVDTAAGPYQNHTVVFLGSEKGIILKFLA----RIGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66 GTLYIAARDHIYTVDIDTSHTEEIYGSKKLTWKSRQADVDTCRMKGKH-KDECHNFIKVL
                                                                                                                                      GRLFVGAENHVASLSLCNISKR----AKKLAWPAPVEWREECNWAGKDIGTECNNFVRLL
                                                                                                                                                                                     LKKNDDALFVCGTNAFNPSCRNYKMDTL-----BPFGDEFSGMARCPYDAKHANVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GREKEQKSPDSTWTFVPDERVPKPRFGCCAGSSSLERYATSNEPPDDTLNFIKTHPLMDE
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                                                                                                                                                                                                                                                                                                                                                                    GOYIYEFFREIAVE-YNTMGKVVPPRVAQVCKNDMGGSORVLEKOWTSFLKARLNCSVP-
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517 RHGKCKKRCLASRDPYCGWIKEGGACGHLSPNSRLIF-EQDIERGNTDGL--GDCHNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A:Cross-references: GB:L40484; NID:g703189; PIDN:AAA73934.1; PID:g703190
                                                   62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rimossersmith, 3.K.; Leonardo, R.D.; Shatz, C.C.; Tessier-Lavigne, Autron 4, 545-959, 1995
Alittle: Somaphortn III can function as a selective chemorepellent A.Reforence number: IS8169; XUID:95267432; PMID:7748562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 666
       Length 748
                                                   Indels
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ilarity 34.1%; Pred. No. 4e-45;
Conservative 89; Mismatches 226;
                                               80; Mismatches 205;
       Score 803; DB 2;
Pred. No. 1.1e-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,Accession: 198169
A:Status: preliminary: translated from GB/EMBL/DDBJ
A:Wolecule Type://nes.
       35.3%;
  Guery Match
Best Local Similarity 35.5%
Matches 191; Conservative
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Algeno: Semaili
G/Superfamily: semaphorin
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Matches 188; Conserv
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euron 14, 941-948, 1995
Title: Murine semaphorin D/collaps;;; is a member of a diverse gene family and ,Reference number: 148744; MJD:9526743;; PMID:7748561
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                                                                                                                                                                                                                                                                                                                                                                                                                                 121 HAYNRIHLLACGIGAFHFICAFVEVGHRAEEPVIRLDP-GRIEDGKGKSFYDPRHRAASV 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PADGKLYSATVIDFLAIDAVIYRSLGESPTLRTVKIDSKWLKEPYFVQAV------DYG 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DYIYEFFREIAVE-YNTMGKWVFPRVAQVCKXDXGGSQRVLEKQWTSFLKARLNOSVP-- 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (A)
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                                                                                                                                                                                                                                                                                                66 GTLYIAARDHIYTVDIDTSHTBEIYCSKKITWKSRQADVDTCRMKGKH-KDECHNFIKVI 124
                                                                                                                                                                                                                                                                                                                                        GRLFVGAENHVASLNIDNISKR----AKKLAWPAPVEWREECNWAGKDIGTECNNFVKIL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GDSHFYFNILQAVTSVIRINGRD----VVLATFSTPYNSIPGSAVCAYDMLDIASVFTG 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RFKEQKSPDSTWTPVPDERVPKPRPGCCAGSSSLBRYATSNEFPOUTLNFIKTHPLMDEA 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VPSIFNRPWFLRIMVRYRLTKIAVOTAAGPYQNHTVVFLGSSKGILLKFLARIGNSGFLK 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VEPTGGRPLPLQVGANYTFTQIAAORVAAAOGHYDVIRIGTBVGTVIKVISVPKGSRPSA 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSLFLEEMSVYNSEKCSYDGVEDRRIMGMQLDRASSSLYVAFSTCVIKVPJGRCERHGRC F21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522 KKTCIASRDFYCGWIKEGGACSHLSPNSRLTF-EQDIBRGNTDGLGDCHNSFVALNGH-- 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           emaphorin A - mouse
;Species: Mus musculus (house mouse)
;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKIYFFFRETAVBAAFALGRISVSRVGQICRNDVGG-QRSLVNKWITFIKARIVGSVPGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             354 PFAHKEGENHQWVSY-QGRVPYPRPGMCP-SKTFGTPSSTKDFPDDVIQFARNHPLMYNS
                                                                                                                                                                                                                                                                                                                                                                                       LKKNDDALFVCGTNAFNPSCRNYKMD------TLEPFGDEFSGMARCPYDAXHANVAL
                                                                                                              Residues: 17749 <SEK>
Cross-references: EXBL:U28369; NID:g974283; FIDN:AAD09138.1; PID:g974284
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.Cross-references: EMBL:X85990; NID:g854323; PIDN:CAA59982.1; PID:g854324
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                       26;
                                                                                                                                                                                                      15.2%; Score 826; DB 2; Length 749; 34.7%; Pred, No. 3.2e-47; ive 85; Mismatches 226; Indels
                                                                    Status: preliminary, translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Status: preliminary; translated from GB/EMBL/DDBJ
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ubmitted to the EMBL Data Library, Unne ;Reference number: G06634 ;Accession: G01856
                                                                                                                                                                                                   Ouery Match
Best Local Similarity 34.7*
Matches 198; Conservative
                                                                                                                                                              Superfamily: semaphorin
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                                                                                            Molecule type: mRNA
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Serapiorin II precursor - fruit fly (Drosophila melanogaster)

() Species: Drosophila melanogaster

() Species: Drosophila melanogaster

() Species: Drosophila melanogaster

() Accession: C49423

8. Kolodkin, A.L., Matthes, D.C.; Goodman, C.S.

() Accession: C49423

A. Ritie: The Senaphorin genes encode a family of transmembrane and secreted growth cone A. Reference number: A9423; MUID: 94094332; PMID: 8269517

A. Accession: C49423

A. Accession: C49423

A. Status: preliminary; nucleic acid sequence not shown, not compared with conceptual transmembrane type: mRNA
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FAYKEHVYFWFRETASEALDUMEEPQIYARVARVCKNDKGGA-RPANERWTSYLKARLNC 286
                                                                       SVP-GDSHFYFNILQAVTDVIRI-NGRDVVLATFSTPYNSIPGSAVCAYDMLDIASVF-T 340
                                                                                                                                                                                                                                                                                                                                                                                                          458 GFLND-SLFLEBMSVYNSEKOSYDGVEDKRIMGMQLDRASSSIYVAFSTCVIKVPLGROE 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                             517 RHGKÇKKTÇIASRDPYÇGWIKEGGACSHLSPNSRLTFEQDIBRGNTDGLGDÇHNSFVALN 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GHSSSLLPSTITSDSTAGESYESRGGMLDWKHLLDSPDSTDPLGAVSSHWHQDKKGVIRE 636
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45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---VPOSKQSVDATSLVMSINA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----REVFOONESEAQPEAVS-----RS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         637 SYLKGHDOLVPVTLLAIAVILAFVMGAVFSGITVYCVCDHRRKDVAVVORKEKELTHS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ------RRGSMSSVTKLSGLFGDTQSKDPKPBAILTPLMHNGKLATPGNTAKMLIKA
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                                                                                                                                S. PSGSSPFYFNELXAVSDPIDAGWNNHVVYTVFSTPDSDVRYSAVCKFSMKKIREEFDN
                                                                                                                                                                                            341 GREKEQKSPOSIWIPVPDERVPKPRPGCCAGSSSLERYAISNEFPODILNFIKIHPLMOE
                                                                                                                                                                                                                                          347 GTEKHONNAOSKWMAENRNEVEKPRPGSCSPDST-----KLPENTVSFILHHPLLHR
                                                                                                                                                                                                                                                                                                                                                         399 PIPSV-AAPLLVEGADRADITQITVLPRVRAVGGH-NYDIDFIGTSDGKVLKVVEVDGNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    499 CCISCSK-CVQLQDPHCAWDSSIARCVHGGSWTGDQFIQNMVFGQSE---OCPEGIIV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33 NYTKQYPVFVGHKPGRNTTQRHRLD----
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C.Superfamily: semaphorin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                669 THHPMSMSCHGSGINTPS 686
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C)Genetics:
A)Gene: sema II
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454 IGNSGFLNDSLFLEEMSVYNSEKOSYDGVEDKRIMGMQLDFRASSSLYVAFSTCVIKVFLG 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     573 VALNGHSSL----LPSTTTSDS7AQEGYESRGGMUDWKHULDSFPSTDP1GAVSSHNRQ 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S6 KULDAADGDSULVGARNAVYNUSLST-----LSVNHKIDWKPPAEHIBECIMKOKSKTCCQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NEIKVLLKKNDDALFVCGTNAFNPSCRNYKMDTLEPFG----DEFSGVARCPYDAKHANV 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111 NYIRVIARKSAGVSIVOGTHAFSPKCREY---TVTBFGIRNIRQFDGGGISPYDFKHNSS 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175 ALFADG--KLYSATVIDFLAIDAYIYR-SIGBSPT---- IRTVKHDSKWLKBFYFVQA 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168 ALYVPGTNOLFVATVTDFVGNDALIYRXTIDETPSSKSAANIRTQSYDARVLMAPNFVAT 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                226 UDYGDYIYEFFREIAVEY--NTMGKVVFFRVAQVCKNOMGGSQRVLEKQWTSFLKABLNC 283
                                                                                                                                                                                                                                                                                                        THPLAMEBAYPSTENRPWHILRIAWRYRLTKINGVATATONNATAMHIGSBKGILLKHLAR 452
                                                                                                                                                                                                                                                                                                                                                         299 SHPAMYNPVFPINNRPIMIKIDVNYQFIDITVYNRVDABDGGYDVMFIGIDGGMULKRVSV 35ª
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359 PKETWHDLEEVILEBMTVFR------EPTIISAMEISTKOOOHYTGSTAGVAQIPIH 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      466 HHONHHGPSLEBERIIYGVENSSTELEGSPKSORALVYWQFQRKNBERKBEL-KMGBLIBE 524
  127 PESDNPEDDKVYFFFREKAIDGEHSGKATHARIGGICKNDFGG-HRSLVKKWTTFLKARL 185
                                                                                                                                                                                            DIASVETGREKEQKSPDSTWTPVPDSBVPKPRPGCCASSSLERYATSNBPPDDTLNFTK 393
                                                                                                                                                                                                                                               24] DVRRVILGPYAHROGPKYGWVPY-OGRVFYPREGTÖP-SKTEGGEDSTKOLPDDVITENA 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 LILYPTLIHFAGAGFPEDSEPISISHGNYTXQYF-----VFVGHXPGRNTTQRHRLDIO 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ypothetical protein YS4ESB.1 - Caenorhabditis elegans
.Species: Caenorhabditis elegans
.Date: i5-Oct-1999 #sequence_revision 15-Oct-1999 #text_change i5-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60 MIMIMNG-TLYIAARDHIYTVDIDTSHTBEIYOSKKUTWKSPOADVDTGRMKGKHKDECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RCERHGKCKKTCIASRDPYCGWIKEGGACGHLSPNS-RLTFEODIERGNTOGIGCHNSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 410 RODIYGKACABECCLARDPYCAW--JGSSCSRYFPTAKRRTRRQJIRNG--DELTHCSDLQ
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                                                                                                                             ICSVPGPNGIDTHE----DELQDVFLMNSKDPKNPTVFGVFTTSSNIFKGSAVCMYSXS
                                                                                     NCSVPG----DSHFYFNILQAVIDVIRINGRD----VVLATFSTPYNSIPGSAVCAYDVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282; Indels 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 29,7%; Pred. No. 9.86-45;
Matches 229; Conservative 129; Mismatches 282; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   v.Experimental source: clone YS4E5B
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277 CLVNX-WSTELKARL UGSVPGEDGIETHFDELQDVFVQQTQDVRNPVIYAVFTSSGS 332 QV 321 SIPGSAVCAYDXLDIASVFTGRFKEOKSPGSTWTPVPDERVPREGCAGGSSS.ERYAT 380 333 VFRGSAVCAYDXLDIASVFTGRFKEOKSPGSTWTPVPDERVPREGCAGGSSS.ERYAT 380 333 VFRGSAVCAYSWADANSFRAMEGRAVCWMPF-SGKMPYPRPGTCPGSFTPSMKS 391 QV 381 SNEFPDDTLNFIKTHPLANDEAVPSIFNRPWELATMVRYRLTALVDTAGGPYCNHTV 437 382 TKDYPDEVINFMRSHPLAYQAVYPLQRRPLVVRTGAPYRLTTIAVDQVDSADGRYEV 448 QV 438 VFLGSEKGIILKFLARIGNSGFLNCSLFLEEXSVYNSEKCSYDGVEDKRIMGWOLDRASS 497 449 LFLGTDRGTVQKVIV-LPRDDQEMEELMLEEVEVFKDPAPVKTNTISSKRQ 498	Oy 498 SLYVAPSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWIKEGGACSHLSPNS-RLTFEQD 556 1	ACTION MILES SERVING SECRETARIES A member of a diverse gene family and creates Actions in this seemahors in 1874, MILES SEATH
181 - KLYSATVTDFLAIDAVLYRSLGESPTLRTYKHDSFWLKEPYFVGAVDYGGY 204 181 - KLYSATVTDFLAIDAVLYRSLGESPTLRTYKHDSFWLKFPYFVGAVDYGGY 201 205 PGLYSGTVAFFTRAJTVIFRTDLYNTSARRLEYYFRTLKYDSFWLKFPYFVGAVDYGGY 201 205 PGLYSGTVAFFTRAJTVIFRTDLYNTSARRLEYYFRTLKYDSFWLKRDVGSFDIGEY 264 205 PGLYSGTVAFFTRAJTVIFRTDLYNTSARRLEYYFRTLKYDSFWLKARDVGSFDIGEY 264 206 PGLYFFREIAVEYNTMGKVYFRTADVCKNDNGGSORVLEKQWTSFLKARLNCSVPGDSHF 291 207 IYFFREIAVEYNNGGKAVYSKIARVCKNDNGGSORVLEKWATYLKARLNCSVPGDSHF 291 208 YFFREIAVEYNNGGKAVYSKIARVCKNDVGGSORVLEKWATYLKARLNCSSGSFPF 203 209 YFWILQAVTDVIRINGRDVVLATFSTPYNSIEGSAVCAYDMLDIASVFTGRFKBCKSFDS 351	352 TWTPVPDERVERPGCAGSSSIERYATSNEFPDILNPIKTHPLMDEAVPSIENRF-W 410	SSULT 13 Date: 21-Dec.196 asequence_revision 06-Jun-1977 Htext_change 24-Sep-1979 Accession: G02173 Accession: G02174 Accession: G02175 Acces

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427
                                                                                                                          479 YDGVEDKKIMGMQLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYGGNIKE 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65 NGTLYIAARDHIYTVDIDTSHTEEIIYCSKKLTWKSRQADVDTCRMKGK-HKDECHNFIKV 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FNILQAVTDVIRINGROVV-LATFSTPYNSIPGSAVCAYDWLDIASVFTGRFKEOKSPDS 351
                                                                                428 KYTKI AVDRVNAADGRYHVEFLGTDRGTVQKVTVLPTNSS-ASGELTLEFLEFKNH--- 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FID:91110593
                                                                                                                                                                                                                                                                                                                                                                             Species: Mus musculus (house mouse)

Date: 28-Oct.1986 Raequonce_revision 13-Mar.1997 #next_change 24-Nov-1999

Accession: S66498

Jingeski, S.; Puruyama, T.; Iwahasti Y.
EBS Lett. 370, 269-272, 1995

Title: Identification of a member of mouse semaphorin family.

Reference number: S66498; Multipi95384803; PMIP:765499;
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GRIPYPRPGTCPGGAFTPNYRTTKDFPDDVVTFIRMHPLMYNSISPIHRRPLIVRIGTDY
                                          RLTKIAVDTAASPYQNHTVVFLGSEKGIILKFLARIGNSGFLNDSLFLEEMSVYNSEKCS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 12.7%; Score 692; DB 2; Length 834; Best Local Similarity 26.0%; Pred. No. 3.5e-38; Matches 232; Conservative 131; Mismatches 326; Indels 204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cross-references: EMBL:S7946); NID:GILL06399; PIDN:AAB35384.1; Superfamily: semaphorin
1-21/Comain: signal sequence #status predicted <SIG>722-834/Product: Nisema P protein #status predicted <MAT>
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                                                           569 VSGTDLVLFCHLSSNLAHAHWTFGSGDLPAEQPGSFLYDTGLQALVVM-------
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                                                                                                                                TOPLGAVSSHN----HODKKG--VIRESYLKG-
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.6 pugen Ltd.		warch time 17 Seconds hout alignments) 1.265 Willion cell updates/sec	PPKPSFAPLSTSMKENDACT 1030			: :27863				d by chance to have a the result being printed, re distribution.		Description	O9h2e6 homo sapien	homo sa	054951 mus musculu 09h3t2 home sapiem	Operation may account	024473 schistocorc 024322 droscobila	Q63548 mattus norv	THE TOTAL CONTROL OF THE CONTROL OF	C9w686 brachydanio	09w71 brachydanic 090607 gallus gall	(13591 nomo sapien (13214 homo sapien	Q62217 mus musculu Q62177 mus musculu	C9w6g6 brachydanic C95025 homo sapien	Q90663 gallus gall	Q60519 mus muscula		009126 mus musculu Q9xxce schistocerc	
GenCore version 5.1. Copyright (c) 1993 - 2003 Comp	otein search, using sw model	October 23, 2003, 17:09:07 ; Sear (witho 2849.2	US-09-856-681-2 5450 1 MRSEALLLYFTLLHFAGAGFP	BLCSUM62 Gapop 10.3 , Gapext 0.5	127863 segs, 47026705 residues	hits satisfying chosen parameters	ength: 0 ength: 2000000000	Minimum Match 0% Maximum Match 100% Listing first 45 summaries	SwissProt_41:*	is the number of results predicted beter than or equal to the score of the twee by analysis of the total score.	SELEVENTS	ery tch le	0.0 103C 1 SM6A 9.8 888 1 SM6A	6.9 888 1	6.6 886 1 SM6B 7.8 930 1 SM6C	7.4 931 I SM5C 7.4 960 I SM6C	7.8 730 I SMIA	5.7 772 1 SM3A	5.5 712	5.5 778 ;	กระเ	5.2 749 1	4.7 748 1	4.6 777 1	4.6 761 14.5 712 1	4.1 1093 1	3.8 751 1	13.8 961 1 SM4D_MOUSE 13.8 697 1 SM2A_SCHGR	3.7 785 1 3.7 785 1
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ALLIGNMENTS

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75. SECURIOR STANDARD, PRT; 1030 AA.

70. SSER, HEAAN

70. SSER, HEAAN

71. SSEP, 2033 [Re., 42, Least edgence update)

72. SSEP, 2033 [Re., 42, Least edgence update)

73. SSEP, 2033 [Re., 42, Least edgence update)

74. SSEP, 2033 [Re., 42, Least edgence update)

75. SSEP, 2033 [Re., 43, Least edgence update)

75. SSEP, 2034 [Re., 18, Read update)

75. SSEP, 20
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PAPORVDSIQVHSSQPSGOAVTVSRQPSLNAVNSLTRSGLKRTPSLKPDVPPKPSFAPLS 1020
 COL GGMODWRHOLDSPOSTDPLGAVSSHNHÇDKKOVIRESYLKGHOQLVPVTLLAIAVILAFV 660
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zyxin-like domain.";
c. Biol. Chem. 275:39647-39653(2000).
-!- FUNCTION: Can act as repulsive axon guidance cues. May play a role in channeling sympathetic axons into the sympathetic chains and controlling the temporal sequence of sympathetic target
                                                                                                                                                                                                                 CNLINACTKEMPPMGSPVIPTELPERASPSHIPSVVVLPITQQGYQHRYVDQPRMSBVAC
                                                   MGAVESGLTVYCVCDHRRKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFGDTQSKDPKPB
                                                                        121 AILTPLYHNGKLATPGNIAKMIIKAOQHHLDJIALPTPESIPTLQQKRKPSRGSREWERN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SECTENCE FROM N.A. MEDIANE STORE W.D.;
Snider W.D.;
"Cloning and expression of a novel murine semaphorin with structural similarity to insect semaphorin I.";
MOI. Cell. Neurosci. 9:26-41(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBSTITE Active as a homodimer or oligomer. Interacts with EVL. SUBCELLULAR LOCATION: Type I membrane protein.
TISSUE SPECIFICITY: PARTICULARLY HIGH LEVELS IN SPINAL CORD, CEREBELLUCH, METENCEPHALON, SUPPERIOR AND INFERIOR COLLICULUS, DIENCEPHALON, OLFACTORY BULB, AND EYE.
DEVELOPMENTAL STAGE: TEMPORALLY AND SPATIALLY REGULATED DUBING
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Klostermann A., Lutz B., Gettler F., Behl C.;
"The cithologous human and murine semaphorin 6A-1 proteins
"The cithologous human and murine temaphorin for 1 proteins
(SDMA6A-1/Sema6A-1) bind to the enabled/vasodilator-stimulated
phosphoprotein-like protein (EVL) via a novel carboxyl-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota, Matazoa: Chordata; Craniata; Vertebrata; Euteleosto
Ammaika: Eutheria Rodentia; Schurognath; Muridae; Murinae;
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30-FAY-2000 (Rel. 39, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Senaphorin 6A precursor (Senaphorin VIA) (Sena VIA)
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POTENTIAL
                                                                                                                                                                                                                                                     CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                   PRC - PICH (GLORAC - N.TINKE) (GLORAC - N.-IINKE) (GLORAC - N.-IINKE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 5450;
100.0%; Pred. Mo. 0;
11vo. 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                       FT1d=VSP
AF279656; AAG29378.1; -. AB037789; BAA92606.1; AUT.INIT. BGNC:10738; SEMA6A.
                                                                                                                                                                                                                                                                       SEMA
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Best Local Similarity 190.
Matches 1030; Conservative
                                                                                                                                                                                                   1030 AM;
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                                                                                                                                                                                                                                                                                             541 ACSHLSPNSRLTFEQDIERGNTDGLGDCHNSFVALNGHSSSLLPSTITISDSTAÇEGYESR
                                                                                                                           GGMLDWRALLDSFDSTDFLGAVSSHNHQDKKGVIRESYLKGHDQLVFVTLLAIAVILAFV
                                                                                                                                                 GGMLDWNDLJEARGSTDPLGAVSSHNEQDKKGVIRESYLKSNDQLVPVTLLAIAVILAFV
                                                                                                                                                                                                  MGAVESGITVYCVCDHRRKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFGDTQSKDPKPE
                                                                                                                                                                                                                                                                     ALLIPLMHNGKLATPGNTAKMLIKADQHHLDLTALPTPESTPTLQQKRKPSRGSREWERN
                                                                                                                                                                                                                                                                                                                                        ONSINACTKDMPPMGSPVIPTDJPLRASPSHIPSVVVLPITQQGYQHEYVDQPKMSE-VA
                                                                            S41 SCAHLSPLSRITTEEQIERGNIDGLGDCHNSFVALNGHASSLYPSTITSDSASRDGYESR
                                                                                                                                                                                                                                  **GAVESGIIVYCVCDHRRKDVAVVQRKEKELTHSRRGSMSSVTXLSGI.FGDTQSKDFKPE
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Homo.
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Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
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Catarrhiní, Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Katayama N
de Souza
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ISoId=09HHJ3-2; Sequence=VSP_006044, VSP_00
SIMILARITY: BELONGS TO THE SEMAPHORIN FAMILY
SIMILARITY: COntains 1 Sema domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SM6B HUMAN STANDARD: PRI; 888 AA. 094317; 098R89; 16-CCT-2501 (Rel 40, Created: 16-CCT-2501 (Rel 40, Last sequence update) 15-SS2-2503 (Rel 40, Last annotation update) 15-SS2-2503 (Rel 42, Last annotation update) SEMAGE OR SEMAZ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFGRM 2).
MEDLINS=2.248660; PubMed=11350127;
Correa R.G., Sasahara R.M., Bengtson M.H.,
Salth A.C.M., Brentani M.M., Sogayar M.C.,
Simpson A.J.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 isoId=Q9H3T3-1; Sequence=Displayed;
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Mammalia, Eutheria, Primates;
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                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMSI outstation the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 KINSATVTDFLAIDAVIYASLGDSPTHRTVKHDSKWLKEPYFVQAVONGDYIYFFFREIA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 VEYNTMGKVVFPRVAQVCKNDMGGSQRVLEKQWTSFLKARLNGSVPGGSHFYFNILGAVT 300
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(POTENTIAL).
(POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C1094FC2BB34FC57 CRC64;
                      SINILARITY: BELCNGS TO THE SEMAPHORIN FAMILY. SIMILARITY: Contains I Sema domain.
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N-LINKED GLONAC.
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MGD; MGI:1203727; Sema6a.
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Best Local Similarity 94.44
Matches 916; Conservative
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                                                                       539 GGACSHLSPNSRLTFFQDIERGNTDGLGDGHNSFVALNGHSSSLLPSTTTSDSTAQEGYE 598
                                                                                                                                                                                                                                                               FVMGAVESGITV-YCVCOHRRKOVAVVQRKEKE--LIHSRRGSMSSVTKLSGLFGDTGSK 715
                                                                                                                                                                                                                                                                                                             607 FVVGAVVSGFSVGWFVGLRERRELA--RRKDKEAILAHGAGEAVLSVSRL----GERRAO 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    758 APEOPPAPGEPTPDGRLYAARPGRASHGDFPLTPHASPDRRRVV-----SAPTGPLDFA 811
PTLQQKRKP-----SRGSKEWERNQNLINACTKDMPPMGSPVIPTDLP---LRASPSH
                                                                                                                                                                   599 SRGGMLDWKHLLDSFDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILA
                                                                                                                                                                                                                 ------TGLIRASLSEDRAGIVSVNLLVTSSVAA
                                                                                                                                                                                                                                                                                                                                                           ----GHPLLPASASSSLLLIAFAR
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Brain Res, Mol. Brain Res, Mole IN BCTH PERIPHERAL AND CENTRAL NERVOUS

1. FUNCTION, MAY PLAY A ROLE IN BCTH PERIPHERAL AND CENTRAL NERVOUS

SYSTEM DEVELOPMENT.

1. SUBCELLULAR LOCATION: Type I membrane protein.

1. SUBCELLULAR TRAGES DETECTED IN THE FIRST BRANCHIAL ARCH OF

EMBRYONIC DAY II (BII) EMBRYO, AND SUBSEQUENTY IN THE MYOTOMES

AND THE DOSSAL ROCT GANGLIA IN DEVELOPING SOMITES FROM BII.5

THROUGH BII.5, BUT NOT IN THE BRAIN. HOWEVER, AT EIS, 18, 21 AND

10. SENAZ MAS HIGHLY EXPRESSED IN THE BRAIN.

1. SIMILARITY: BELONGS IO THE SEMAPHORIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordatu, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rati
NGSI_TaxiD=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Wistar, TISSUE=Brain,
MEDLINE-98097397, PubMed=9427525,
Kivuchi K., Ishida H., Kimura T.,
"MOLecular cloning of a novel member of semaphorin family genes,
semaphorin Z.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       872 ENLESLP-PKVPQREASL-----GPPGASLSQT 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Schaphorin 63 precursor (Semaphorin Z) (Sema (SEXAGE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     812 SAADGLPREWSPPTGSLPRPLGPHAPPAATLRRT
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                                                                                                           EMBL; AB000776; BAA25687.1; -.
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SM6P_RAT
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(2)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | N-IINKED | GLCNAC | FOTENTIAL | | |
| N-IINKED | GLCNAC | GLCNAC |
| N-IINKED | GLCNAC |
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| N-IINKED | GLCNAC | GL
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WGFQRARGPPRCRLGV (in :soform 2);
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6FFB44D6828C70CB CRC64;
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Pred. No. 6.10-122;
send an email to licensewisb-sib.ch)
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Best Local Similarity
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InterPro, IPR001627, Sena.
Pfam, PP01403, Sema; 1.
SMART, SM00423, PSI; 1.
SMART, SM00630, Sema; 1.
Signal, Transmembrane; Multigene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---SYDGVEDKRIMGMQLDRASSSLYVAFSTCVIXVPLGRGERHGKCKKTCLASRDFYCG 534
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 MIMINNGTLYIAARDHIYTVDIDTSHTBEIYCSKKLTWKSRQADVOTCRMKGKHKDECHN
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                                                                                                                     Multigene family; Neurogenesis;
                                                                                                                                                                                    SEMAPHORIN 6B.
EXTRACELLULAR (POTENTIAL)
POTENTIAL.
CYTCPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
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Best Local Similarity 42.7%; Pred. No. 7.1e-121;
Matches 433; Conservative 132; Mismatches 260;
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InterPro, IPR003639; Plexim-like.
InterPro, IPR001627; Sema.
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                                              Pfam. FFC1403, Sema)
SMART, SMC612; FS1)
SMART, SMC610; Sema;
Signal, Transmembrane,
Developmental protein.
Signal,
Signal,
Zignal,
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                                                                                                                     Transmembrane;
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887 AA;
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DOMAIN
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EHISSKSPNHGVNIVENIDSLP-PKVPQREASL-----GPPGASISQIGISKRLEMHHS 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         845
                                                                                                                                                                                                                                                       716 LPQKRLPTTHPHAHALGPRAWDHSHALLSASASTSLEELAHTRAPEQPP----VPTESG 770
                                                                                                                                                                                                                                                                                                                                             -----DPLRASPSHIPSVVVLPITQCGYQHEYVDQPKMSEVAQMALEDQAATLEYKTIK 856
--SGLFGDTQSKDPKPEAILTPLMHNGKLATPGNTAKMLIKADQHHLDLTALPTPESTPT
                                                                            663 GTGGRGGAGGGPPGALLAPLMQNGW-----TKAALLHGGPHOLDSGLLPTPEQTP-
                                                                                                                                                                      -- CMPPMGSPVIPTD--
                                                                                                                                                                                                                                                                                                                                                                                                                              PESRLCAPRSCRASHPGDFPLTP-----HASPDRRRVVSAPTGPLDSSSVG-----
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-.. TISSUE SPECIFICITY: DURING BEYELOPMENT IT IS EXPRESSED IN SUBRECIONS OF THE NERVOUS SYSTEM AND IS PARTICULARLY PROMINENT NUSCLE. IN ADULTHOOD, IT IS EXPRESSED USIQUITOUSLY.
-:. SIMILARITY: Contains I Sema domain.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi.
Marmalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "A novel transmembrane semaphorin can bind c-src.",
Mcl. Cell. Neurosci. 9:409-419(1997).
-:- SUBUNIT: HOMODIMER. BINDS SPECIFICALLY THE SH3 DOMAIN OF
PROTOCNCOGENE C-SRC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-38027184; PubMed-3361278;
Eckhardt F., Behar O., Calautt: E., Yonezawa K., Nishimoto
Fishman M.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEMAPHORIN 6B.
EXTRACELLULAR (POTENTIAL)
POTENTIAL.
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30-MAY-2000 (Rel. 39, Last sequence update)
10-CCT-2011 (Rel. 40, Last annotation update)
Semaphorin 6B precursor (Semaphorin VIB) (Sema
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    363 - PQVPAEPGPE----SRICAPRSCRASHPGDFPLTPHASFDRRRVVSAFTGPLDPSVG- 815
                                                                                         ----DGLPGPWSPPATSSLRRPGPHGPPTAALRRT-----HTFNSG----EARP 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cuyang S., Zhou G., He F., Zhang C., Xing G., Yu Y., Wu S., Zhang Y.,
Cuyang S., Zhou G., He F., To the Exploenant/DDBJ databases.
Submitted (JAN-1201) To the Exploenant/DDBJ databases.
-!- FUNCTION: MAY BE A STOP SIGNAL FOR THE DORSAL ROOT GANGLION
NEURONS IN THEIR TARGET AREAS, AND POSSIBLY ALSO FOR CHER
NEURONS. CONNECTIONS (BY SIMILARITY).
-!- SUBCELLUIAR LOCATIONS (BY SIMILARITY).
-!- ALTERNATIVE PRODUCTS:
                                          ----GPPGASISQTGISKRLEMHHSSSYGVDYKRSYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; INTOINES, Sema.
InterPro; IPR001627; Sema.
InterPro; IPR001627; Sema.
InterPro; IPR001627; Sema.
InterPro; IPR001627; Sema; I.
SMART; SM00433; Sema; I.
Signal: Transmembrance; Multigene family; Neurogenesis; Glycoprotein; Developmental protein; Alternative splicing.
I 24 POTENTIAL.
I 25 930 SEMAPHORIN 6C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sut.eleostomi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Mesazoa, Chordata, Craniata, Vertebrata, Butelo
Mammalia: Eutheria, Primates, Catarrhini, Hominidae, Homo.
NGBI_TaxID=9606,
                                                                                                                                   322 INSLIRSHÇATTLKRNNTNSSNSSHLSRNQSFGRGD-NPPPAP 963
                                                                                                                                                                               GCHRPRRHP------PADSTHL---LPCGIGERIAPPVP 886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSP 006347;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=3; Synonyms=Long; Sold=CH71; Sold=CH717-3; Sequence=VSP C06047; SIMILARITY: BELONGS TO THE SEKAPHORIN PAMILY. SIMILARITY: Corcains 1 Sema domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Event=Alternative splicing; Named isoforms=3;
                                                                                                                                                                                                                                                                                      SWSC_HUMAN STANDARD; PRT; 930 AA., 0943TE, 06AXTE, 06AXTE, 06AXTE, 06. Created; 28-FEB-2003 (Rel. 41, Last sequence update) 28-FEB-2003 (Rel. 41, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) Semphorin C precursor (Semaphorin Y) (Sema Y) SEMAC OR SEMAY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kimura T., Ishida H.)
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=2; Synonyms=Short 2;
IsoId=09H3T2-2; Sequence=VSP_006046,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=1; Synonyms=Short 1;
[sold=29H3T2-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SECTENCE FROM N.A. (ISOFCAMS 1; 2 AND 3)
                                                                                                                                                                                                                                                                      STANDARD;
08WXU0;
                                              NIVENLDSLP-PKVPOREASL-
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EMBL, PR339152; AAL72098.1; -.
EMBL, AF359153; AAL72099.1; -.
EMBL, AF359154; AAL7209.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. (ISOFORM 1)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPSYVVLPITQQGYQHEYVDQP----KMSEVAQMALEDQAATLEYKTIKEHLSSKSPNHGV 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303 IRINGRDVVLATFSTPYNSIPGSAVCAYDMLDIASVETGRERKEQKSEDSTWTPVPDERVP 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363 KPREGCCASSSLERYAISNEPPECTLNFIKTHPLMDEAVPSIFNRPWFIRTMVRYRLTK 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   431 VAVDVGAGPWGNÇTIVFLGSEAGIVLKFLVKPNASVSGTTGPSIFLEEFETYRPDRCGRP 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SYDGVEDKRIMGMQLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWIK 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              608 AFVVGAVVSGFSVGWFVGLRERRELA--FRKDKFALLAHGGSEAVLSVSRL---GERRG 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KDP-------KPEAIDTPIMHNGKLATPGNTAKYLIKADQHHDDLTAUPTPESTP 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  662 TGPGGRGGAGGRPGSPEALLAPLMQNGW-----TKAALLHGGPKBLBTGSLPTPEGTP 715
                                                                                                                                                                                                                                                                                                                                                                                                                       63 IMMGTLYIAARDHIYTVDIDTSHTESIYCSKKITWKSRQAFVJTCRMKGKHKDECHNPIK 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VILKKNDDALFVOGTNAFNPSORNYKMDTLEPPODBFSCKASCTYDARDANVALFADGKL 182
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υ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENYLEKWWSRVARVCKNOVGGSPRVLEKQWTSFLKARLNCSVPGOSHFYFNVLQAVTGV 312
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43 RVNRTLFIGDEDNLYQVELBPSTSTELBRYQRKUTWRSNISBIOVORMKGKQBGBCRNFVK 137
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                                                                                                                                                                                                                                                                                                                                 8 LYFILLHFAGAG---FPEDSEFISISHGNYTKQYPVFVGHKPGRNTTGR--HRIDIQMIN
                                                                                                                                                                                                                                                                                                                                                                           13 LSFFLÖJLLGVIYGLFPEEPPPLSVAPNOYLSHYFVFVGSGFGRLTAABGAEDINIQRVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133 VILLROBSTLEVÖSSNAFNPICANYSMOTLOLLGDSISGMARGFYDPKHÄNVALFBEGMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               313 VSLGGRPVILAVPSTPSNSIPGSAVOAFDYNQVAAVFEGRFREQKSPESIWTPVPEDQVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               373 RPREGCCAAPGM--QYNASSALPLETLNFVKTHPLMDEAVPSLGHSFWIVRTLMRHQLTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAVOTAĞOPYQNHTVVFLGSEKGIILKFLAR--TONSGFLNDSLFLEEMSVYNSEKC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538 EGGACSHLSPNSRLTFEQDIERGNTDGLGDCHNSFVALNGHSSSLLPSTTTSDSTAQEGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D-GSCIFLRPGISATFEQDVSGASTSGLGDC--------
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                                                                                                                                                                                                                                                                                      Indels 176; Gaps
                                       POLY-LEU.
N-LINKED GLONAC. (POTENTIAL).
                                                                                                                                                                                                                                               Length 886;
  CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                     Ouery Match
Best Local Similarity 43.7%; Pred. No. 9.5e-121;
Matches 438; Conservative 132; Mismatches 257;
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DE GEO -GGPEPPPSKDGLAVOTPCLYTTFLPPPEGVPPP	RESULT 7 SMCC MOUSE 1D SMACC MOUSE AC DOWTH: 931 AA. AC DOWTH: 39, Created; DT 30-MAY-2000 (Rel. 39, Created; DT 30-MAY-2000 (Rel. 39, Last sequence update) RN MEDITINE-3916081: PubMed=10049526; RN MEDITINE-3916081: PubMed=10049526; RN MEDITINE-3916081: Neurosci. 13:9-23(1999).	Contine SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstainnton the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way contined and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/contines requires a license agreement (See http://www.isb-sib.ch/announce/content is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/content is not removed. Usage by and for commercial entities requires a licenseasisb-sib.ch/. EMBL; AB013729; BAA76294.1; EMBL; AB013729; BAA76294.1; EMBL; AB013729; Sema. 1. EMBL; AB013729; Sema. 1. EMBL; SW0530;
DOWAIN 25 604	6 LLLYPTLLHFAGAGPEDSSPISISHGNYTKOYPVEVGHYEGRNTTORHSLDIGKLYIMN 65 13 JLLLSJPH-TQAAFPODPLDLISDLQSTSFLSWFRGLEDDAVAAEL-GDEGRETTIN 70 66 GTLNIAARDHYTVOIDTSHT-BEIVOSKKITWKSRQADVOTGRWGKHKDEGHNFIKUL 124 71 RTLLVARDHHYFSFDJQAEBGGGLVNKKITWKSRQADVOTGRWGKHKDEGHNFIKUL 125 125 LKKNDDALFVGGTNSFSPVGRSKITTWKSRQADVOTGRWGKHTGEGNNFIKUL 129 129 VPWDSQTLLAGGTNSFSPVGRSYGITSLQQBGBESGQARGFPATGSNVAIFAGGSLYS 184 185 ATVTDPLAIDAVIYRSJGRSPTLRTVKHDSKMIKEBYFVQAUDYGRYIYPFREEAVENN 244 185 ATVTDPLAIDAVIYRSJGRSPTLRTVKHDSKMIKEBYFVQAUDYGRYIYPFREEAVENN 244 189 ATAAAPQASUAVYRSJGRSPTLRTVKHDSKMIKEBYFVQAUCHTGNYNDIR 304 180 ATAAAPQASUAVYRSJGRSPTLRTVKHDSKMIKEBYFVQALEHGDHYYPFREEDVYNN 268 181 ATVTDPLAIDAVIYRSJGRSPTLRTVKHDSKMIKEBYFVGALEHGDHYYPFREEDVYNN 268 182 ATVTDPLAIDAVIYRSJGRSPTLRTVKHDSKMIKEBYFVGALEHGDHYYPFREEDVYNN 268 183 ATVTDPLAIDAVIYRSJGRSPYLEKOWISFLKARLNGSVPGDSHTYFNILGAVTDVIR 304 184 ATAAAPQASUAVYRSSJGRSPALERIWTSFLKARLNGSVPGDSHTYFNILGAVTDVIR 304 185 ATVTDPLAIDAVIYRSJGRSPALERIWTSFLKARLNGSVPGDSTFYFDVLGATGPVN 308 245 TMGKYYFPRYAGGSPRALERIWTSFLKARLNGSVPGDSTFYFDVLGATGPVN 308 246 TMGKYYFPRYAGGSPRALERIWTSFLKARLNGSVPGDSTFYFDVLGATGPVN 308 247 TMGKYYFPRYAGSPRATSNBFPDDTLNFIKTHPIMDEAVPSIFNRYMFRITTKIA 424 248 REGGCAGSSSLERYATSNBFPDDTLNFIKTHPIMDEAVPSIFNRYMFRITTKIA 424 248 REGCCAGSSSLERYATSNBFPDDTLNFIKTHPIMDEAVPSIFNRYMFRITTKIA 424 248 REGCCAGSSSLERYATSNBFPDDTLNFIKTHPIMDEAVPSIFNRYMFRITTKIA 424 248 REGCCAGSSSLERYATSNBFPDDTLNFIKTHPIMDEAVPSIFNRYMFRITTKIA 424 254 VPTAAGPYQNHTTVFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 255 VDTAAGPYQNHTTVFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 256 VPTAAGPYQNHTTVFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 257 VDTAAGPYQNHTTVFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 258 VPTAAGPYQNHTTVFIKTHFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 259 VPTAAGPYQNHTTVFIKTHFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 259 VPTAAGPYQNHTTVFIKTHFIKTHPIMDEAVPSIFNRYMFRITTVRYRLTKIA 425 259 VPTAAGPYGNHTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	426 VDSWADPRAITUMELSSNOTVLKVLPPGGRSGG-PEPILLETIDAYSFRACSSKETAG 486 485KRIADMOLERASSSLYVARSTCVIKKVLPPGGRSGG-PEPILLETIDAYSFRACSSKETAG 486 487 TARRIIGLEUDTEGHRIPVARSGCIVYLPLSRCARHGGRSCDPVGGWRSGRG 542 487 TARRIIGLEUDTEGHRIPVARSGCIVYLPLSRCARHGGRSCLASCDPVGGWRSGRG 545 543 SHLSFNSRLIFEQDERSRLPPARSGCIVYLPLSRCARHGACGRSCLASCDPVGGWRSGRG 545 546 VDIRGSGGTDVDGAGNQESMEHGDCQDGATGSQSGPGDSAY 586 601 GGMLDWKHLLDSPDSTDPLGAVSSHNHQDXKGVIRESYLKGHDQLVPVTLLAIAVILAFV 660 587

	PARTIES OF PARTIES STANDARD; PRT, 960 AA. ACTUALLS OF PARTIES STANDARD; PRT, 960 AA. ACTUALLS OF PARTIES STANDARD; PRT, 960 AA. ACTUALLS OF PARTIES STANDARD; PRT, 960 AA. IN WAY 2000 (Rel. 39, Last Sequence update) BENEVA 2000 (Rel. 39, Last
T DOYALN 234 541 SEXA. T DOMAIN 663 669 POLY-PRO. T CARBOHYD 71 71 N-LIKKED GLCNAC) (POTENTIAL). T CARBOHYD 287 N-LIKKED GLCNAC) (POTENTIAL). C SECUENCE 931 AA, 99537 NW; 51D995594269F125 CRC64; Query Match Query Match Matches 374; Conservative 145; Kismatches 353; Indels 177; Gaps 32;	6 G GTLLVYTAAAAAHPOPPRATATATATATATATATATATATATATATATATATATA

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                                                                                                                                                                                                     885
  24.0 VKHLRASGG-PWEWNQNGNNASEGFGR-PRGCSAAGGPAPRVLVRPPPPGCPGQEVETTL 798
                                                   -- EYVDQPKMSEVAÇMALEDQAATLEYKTIKEHLSSKSP 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.

X MEDINE-95(4025) PubMed-1418998;

MEDINE-95(4025) PubMed-1418998;

X Kolodkin A.J., Matthes D.J., C'Connor T.P., Patel N.H., Admon A.,

Bartley D., Goodman C.S.;

"Fascicin IV: Sequence, expression, and function during growth conerguization IV: Sequence, expression, and function during growth conerguization in the grasshopper embryo.";

"Guidance in the grasshopper embryo.";

"Muron 9:831-645(1992).

"SURCIDUAL ALOSATION: Type I membrane protein.

"I SUBER SPECIFICATY: DYMANCALLY EXPRESSED ON A SUBSET OF AMON PATHANYS IN THE DEVELORING IN EARLY EXPRESSED ON A SUBSET OF AMON PATHANYS IN THE DEVELORING IN EARLY EXPRESSED ON A SUBSET OF AMON PATHANYS IN THE DEVELORING IN BUDS.

"I SIMILARITY: BELCKYS TO THE SEXMEDORIN FAMILY."
                                                                                                                                                      865 NHGVNLVENLDSLPP-----KVPQREASLGPPGASLSQTGLSKRLEMHHSSSYG
                                                                                                                                                                                                                                                      VOYKRSYPTNSLTRSHÇATTLKRNNTNSSNSSHLSRNQSFGRGDNPPPAPQRVDS--IQV
                                                                                                                                                                                                                                                                                                     ------PPGLI,TRVPSGGPSR
                                                                                                                                                                                                  R------BCVPPLRLDVPPDGKRAAPSGRPALSAPAPRLGVSG-SRRL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  su-Mar-2000 (Rel. 39, Last sequence update)
16-00T-2001 (Rel. 40, Last annotation update)
Semaphorin LA precursor (Semaphorin-I) (Sema I) (Fasciclin IV)
SEWA-1A OR FAS4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schistocerca americana (American grasshopper).
Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota,
Neoptera, Orthopteroidea, Orthoptera; Caelifera, Acridomorpha,
Acridoidea, Acrididae, Cyrtacanthacridinae, Schistocerca.
NCSI_TaxID=7009,
                                                                                                                                                                                                                                                                                                                                                   HSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTPSLKPDV--PPKPS 1015
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                                                                                                     EELIRYLHGPQPPRKGSBPLASAPFTSRPPASEPGAALFVD-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transmembrane;
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Interpro | IPR03659; Plexin_repeat.
Interpro | IPR03659; Sema.
Pfam; PF01437; PS1; ...
Pfam; PF01403; Sema; 1.
SYART; SWG0423; PS1; 1.
SYART; SWG0423; PS1; 1.
SIGNA1; Developmental protein; Transm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-WAY_2000 (Rel. 39, Created)
30-WAY-2000 (Rel. 39, Last seq:
16-0CT-2001 (Rel. 40, Last anno
                                                                                                                                                                                                                                                                                                     -----PFPT----HRA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; 100709; AAA29808.1; -.
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                                                   C---3YCH----
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SIGNAL
CHAIN 2
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Q26473;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTLYIAARDHIYTVDJIDTSHT-EEIYCSKKLTWKSRQADVGTCRMKGKEKDECHNFIKVL 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125 LKKNDDALFVCGTMÆFNPSCRNYKMDTLEPFGDEFSGMÆRCPYDAKHAMVALFADGKLYS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TMGKVVFPRVAQVCKNDMGGSQRVLBKQWTSFLKARLMCSVPGDSHFYFNILGAVTDVIR 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch
VD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128 VPWDSQTTLACGTNSFSPVCRSYCITSLDQEGEELSGQARCPPDATQSTVAISAEGSLYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATVIDELAIDAVIYRSLGESPILFTVKHDSKWIKEPYFVQAVDYGOYIYFFFREIAVEYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188 ATAADEQASDAVVYRSLGPQPPLFSAKYDSKWIREPHVYALEHGDBVYFFFRRVSVEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIGRVQFSRVARVCKRDMGGSPRALDRHWTSFLKLRLNCSVPGDSTFYFDVLQSLTGPVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LHGRSALFGVFTTOTNSJPGSAVCAFYLDDJSRGFEGKFKEQRSLDGAWTPVSEDKVPSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----KRIMGMÇLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTC1ASPDPYGGWIKEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRAARRIIGLELDTEGHRLFVAFFGCIVYLSISRCARHGACQRSCLASIDPYCGWHRFRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACSHLSPNSRLTFEQDIE-RGNTIGL--GDCHNSFVAIN---GHSSSIL-----PSTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CVNIRGPGG----TDVDLTGNQESMEHGOCQDGATGSQSGPGDSAY/LLGPGPSPETPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SDSTAQEGYESRGGMLDWKHILDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPSDAHPGPQS-----STSGA-----STSGA-----HTQGVRRDLSPASASRSIPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLLLACVAAAFALGASVSG11VSCAC--RRAN----RRRSKD1ETPGLPRP1SLRS1AR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FGDTQSKDPKP---EAILTPLMHNGKLATPGNTAKMLIKADQHHLDLTALPTPBSTPTLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 689 HGGGPEPPPPKJGBAAQTPQLYTTFLPPPEGGSPP-----ELACLPTPETTPELP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RTLLVAARDHVESPDIQAQEESEGLVPNKFLTWRSG - - DMENGAVRGKIJDECYNYIRVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INGROVVLATESTRYNSIPGSAVCAYOMLDIASVFTGREKEQKSFDSTWTFVPDERVPKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365 RPGCCAGSSSLERYATSNEFPDDTLNFIKTHPIMDEAVESIFNRPWFLRTMVRYRLTKIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             425 VOTAAGRYQMHYVVFLGSEKGIILKFLARIGNSGFLARSLFLEEMSVYNSBKCSYDGVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427 VOGNAGEHRNTTVIFIGSNOGIVLKVIPP-GGOSLGPEFIILEEIDAYSHARCS--GRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 LLLYPTTLHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQRHRLDIQMIMNN
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                                                                                                                                                                                                  ) (POTENTIAL).
) (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                            180;
                                                                                                                                                                                                                                                                                                                                                                        Length 960;
                                                                                                                                                                                                                                                                             Sema V-S).
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); Mismatches 363; Indels
POTENTIAL,
SEMLPHORIN 60.
SERFACELLURAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
SEML.
                                                                                                                                                                                                                                                                                                                         C88293 55607 55086 CRC64
                                                                                                                                              PCLY-PRO.
PCLY-PRO.
PCLY-PRO.
N-LINKED (SLCNAC.
N-LINKED (SLCNAC.
N-LINKED (GLCNAC.
N-SINKED (GLCNAC.
N-SISRING (IN 1806 CM S)
FFT1d=VSP_006 C48
                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                      Score 1491; DB 1, No. 3.16-88;
                                                                                                                                                                                                                                                                                                                                                                        Query Match 27.4%; Sco
Best Local Similarity 35.1%; Pre
Matches 374; Conservative 149;
                                                                                                                                                                                                                                                                                                                               102610
  360 AM;
          643
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DCMAIN
DCMAIN
DOMAIN
CARBOHYD
CARBOHYD
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Thu Oct 23 17:22:37 2003

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                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                               221 FFRETAVEYINGGKAIYSRVARVCKHOKGSPHQFGDR-WTSFLKSRLNCSVFGDYFFYFN 279
                                                                                                                                                                                                                                                                                                                                                                                                      28C EIGSTSDIEGNYGGGVERLIYGVFTTPVNSIGGSAVCAFSMKSILESFDGPFKEGETWN 339
                                                                                                                                                                                                                                                                                                                                                                                                                                        351 STWIPVPDERVPKPRPGCCAGSSLERYATSNEFPDDTJNFIKTHPLMDEAVPSIFNRFW 410
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                                                                                                                                                                                                                             55 EKDENSLLVGARNIVYNISLRDIJEPTEQ-----RIEWESSGAHRELGYLKGKSEDDGQN 109
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د
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DSLFLEEMSVYNSEKCSYDGVEDHRIMGMOLDRASSSLYVAFSTCVIKVPLGRC--ERHG-519
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                                                                                                                                                                                                                                                                          110 YIRVDAKIDDDRVIJGGTNAYKPLÖRHYALKD----GLYVVEKEYEGRGLÖPFDPDHNST
                                                                                                                                                                                                                                                                                                175 ALFADGKLYSATVTOFLATGAVIVRSLGBSPTLRTVKHOSKKI KEPYFVQAVDYGDYIYP
                                                                                                                                                                                                                                                                                                                                              235 FFREIAVEYNTMGK7VFPRVAÇVCKNDMGGSQRVLEKÇWTSFILKARLNÇSVRGDSHFYFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             340 SNWLAVPSIKVPEPRPGQCVND-----SRTLPDVSVNFVKSHTIMDEAVPAFFTRPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    411 FLRIMVRYRLIKIAVD----TAAGPYQNHTVVFLGSEKGIILKFLARIGNSGFLN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 LIRISLQYRFTKIAVDQQVRTPDG- KAYDVLFIGTDDGKVIKAL----NSASFDSSDTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----ASPVPTQPTTKSSGDPVHSIHQAEFEPE---IDNEIVIGVDDSNVIPNTLAEINHA
                                                                                                                                                            8 LYFTLIHFAGAGFPEDSSEISISHGNYTKQYPVFVGHKPGRNTTQR-----HRLDIQMI
                                                                                                                                                                                   -----KYYVQF-----GEERVQRFLGNESHKDHFKLL
                                                                                                                                                                                                         62 MIMNGTLYIAARDHIYTVDID--TSHTBEIYOSKKLTWKSPQAOVDTGRMKGKHKDZGHW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520 KCKKTCIASRDPYCGWIKEGGACSH1-SPM---SRLIFEQDIERGNIDGLGDCHNSFVAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  500 NGRB-CVSLQDPYCAMONVELKCTAVGSPDWSAGKRRFIQNISLGEHKACGGRPQTEIV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         576 NGHSSSILLPSTTTSDSTA-----QEGYESRGGMLDWKHLLDSFDSTDFLGAVSSHNHQ
                                                                                                                                      1177 Gaps
                                              (POTENTIAL)
                                                                  (POTENTIAL)
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                                                                                         CRC64:
                                                                                                                          ed. No. 5.9e-55;
Mismatches 224;
                                                                                                                                                                                                                                                     20 PIKVLLKKNODALFVGGTNAFNPSGRNYKNOTGEFFGD
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                       (GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                  (GLONAC.
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30-MAY-2003 (Rel. 39, Last sequence update)
16-0C7-2031 (Rel. 40, Last annotation update)
16-0C7-2031 (Rel. 40, Last annotation update)
SEMA-1A OR DSEMA-I OR CG18405.
Drosophila melanogaster (Fruit [Iy).
                                                                                                               Score 971.5;
            POLY-PHE
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                          Pred.
                                                                                                                                      124;
                                                                                                                                                                                11 LEWVALH -- AAAWVNDVSP--
                                                                                                                17.88;
                                                                                                                          34.43;
                                                                                          81214
                                                                                                               Query Match
Best Local Similarity 34.43
Matches 244; Conservative
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 515
222
44
71
163
366
539
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267
360
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730 AA;
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Q24322;
DOMAIN
DOMAIN
CARBCHYD
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                                            CARBOHYD
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                                                                                          SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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the European Bioinformatics Institute. There are no restrictions on
use by non-profit institutions as long as its content is in no
                                                                                                                                                                                                                                 TISSUE=Embryo;
MDDLINE=94094312; PubMed=8269517;
MDDLINE=94094312; PubMed=8269517;
MCOCAkin A.L., Marthes B.U., Goodman C.S.;
"The semaphoran genes encode a family of transmembrane and secreted growth cone guidance mclecules.";
Insecta; Pterygota;
                                           Endopterygota; Diptera; Brachycera; Muscomorpha;
Sukaryota; Metazoa; Arthropoda; Hexapoda;
                                                                         Drosophilidae, Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; L26082; AAA88789.1; ..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                              FROM N.A.
                                                                         Ephydroidea; Dro:
NCBI_TaxID=7227;
                                           Necptera;
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SEQUENCE FROM N.A
                                                                                                                                                                                  NCBI_TaxID=10116;
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DCMAIN
DISULFID
                                                      SM3A_RAT
Q63548;
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                              RESULT 11
SM3A_RAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183 YSATVIDELAIDAVIYASLGESPILRTVRIDSKMLKSEVFVQAVDYGDVIYSPRBIAVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          243 YNTMGKVVEPRVAQVCKNOMGGSCRVLEKQWTSFLKARLNOSVPGDSHFYFNLLQAVTDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224 FINCSKAIVSRVARVCKWDKGGPFR-FRNRWTSFLKSRINGSIFGDYPFYFNEIGSASNI
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                                                                                                                                                                                                                                                                                                                                                                                                              SLLIGARNTVFNLS:----HDLVBQQRLVWTSPEDDTKMCLVKGKDEEACQNYIRTMVV
                                                                                                                                                                                                                                                                                                                                                                                                                                        127 KNDDALFVCGTNAFNFSCRNYKMC----TLEPFGDEFSGMARCPYDAKHANVALFADGKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                        169 YSGTVADFSGSDPIIYRE-----FLQTEQYDSLSLNATNFVSSFTCGDFVYFFFRETAVE
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(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                              87;
                                                                                                                                                                                                                                                                                                                                   17.1%; Score 912.5; DB 1; Length 771; ilarity 35.0%; Pred. No. 2.1e-52; Conservative 136; Mismatches 213; Indels 87;
EMBL; AE003621; AAF52696.1; -.
PlyBase: F8gn0011259; Sema-ia:
InterPro: IPR001659; Plexin_like.
InterPro: IPR001657; Sema.
InterPro: IPR00167; Sema.
PEam; PF01437; PSI; :.
PEam; PF01433; Sema; i.
SMART; SW00433; PSI; i.
SMART; SW00630; Sema: i.
SMART; Developmental protein; Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                              752E7DD516F32DA5 CRC64;
                                                                                                                                                         SEMAPHORIN 1A.
EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                POTENTIAL.
CYTOPLASMIC (POTENTIAL)
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POLY-PRO.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
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                                                                                                                                                                                                                                                                                                               86935 MW;
                                                                                                                                             771
608
629
777
519
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 219; Conserv
                                                                                                                               Neurogenesis.
Signal 2
CHAIN 2
DOWAIN 2
DOWAIN 60
DOWAIN 61
DOWAIN 61
CARBOHYD 68
CARBOHYD 68
                                                                                                                                                                                                                                                                                   CARBOHYD
CARBOHYD
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bicinformatics and the EMBL outstation-the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A SECURNE-PERIOD NATIONAL TO SHELL TESSIENT-LAVIGNE M., MEDINE-95267432; Pubmed=7749562; MEDINE-95267432; Pubmed=7749562; MEDINE-95267432; Pubmed=7749562; MEDINE-95267432; Pubmed=7749562; MEDINE-95267432; Pubmed=7749562; MEDINE B. M., MEDINE MEDINE M., 
                of a diverse gene family
                                                                                                                SECUENCE FROM N.A.
MEDLINE=97470885; Pubxed=9331345;
Tanigucni M., Yuasa S., Fujisawa H., Naruse I., Saga S., Mishina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                              causes severe abnormality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO THE SEMARHORIN FAMILY.
SIMILARITY: Contains 1 Sema domain.
SIMILARITY: Contains 1 immunoglobulin-like C2-type domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE: PSS0835; IG LIKE; 1.
Signal; Immunoglobulin domain; Multigene family; Neurogenesis;
                                                                                                                                                                                                                                                                                                                                                       Kimura T., Fishman N.C.,
"CONA sequence of mouse collapsin/semaphorin III.",
Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
     "Murine semaphorin D/collapsin is a member of a diverse and creates domains inhibitory for axonal extension."; Neuron 14:941-948(1995).
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ARG/LYS-RICH (BASIC).
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SEMA.
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                                                                                                                                                                                                                        "Disruption of semaphorin III/D gene
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EMEL: D8528; BAA29773.1; -
EMEL: J40484; AAL7761.1; -
EMEL: J40484; AAL7761.1; -
EMEL: J40484; AAL77934.1; -
PIR; I40747; I42747.
PIR; I80747; I42747.
PIR; IS0759; ISSMA3A.
IECEMPRO: IPROC7110; IG-IIKe.
IELEMPRO: IPROC7110; IG-IIKe.
IELEMPRO: IPROC7100; IG-IIKe.
                                                                                                                                                                                                                                                       peripheral nerve projection.";
Neuron 19:519-530(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF 107-772 FROM N.A.
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Pfam: PF01403; Sema; 1.
SWART; SM00409; 1G; 1.
SWART; SM00423; PS1; 1.
SWART; SN00630; Sema; 1.
                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                            47 GRNTTQRARLDIQXIMINNGT----------LYIAARDHIYTVDIDT
                                                                                                                                                                                                                                                                                              25 GKNNVPRLKLSYKEMLESNNVITFNGLANSSYHTFLLDEERSRLYVGAKOHIFSFNL--
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140 ICTYIEMGHHFEDNIFKLQUSHFENGRGKSPYDPKLLTASLLTDGSLYSGTAADEMGPOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196 VIYRSLGESPTLRTVKHDSKWLKEPYFVQA------VDYGDYIYFFFREIAVEYNTMGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260 ATHARIGGICKNDFGG-HRSLYNKWTTFLKARLICSVPGPNGLDTHF----JDELGDVFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INGRD----VVLATESTPYNSIPGSAVQAYDMIQIASVĘTGREKEÇKSPOSTWTPVPOSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314 NNSKOPKORITIVKOVPITISSNIFKISAVČMYSKSOVRRVETGRYAHRDGRAVEVETGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373 VEZERÉGICE-SKTEGSEDSTKDIEDÖVITERREHERMYKNEVFFINNRETZIKTÖVNYGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 GVEDKAIMGMQLDRASSSLYVAFSTCYIKVPLGRCERHGKCKKTCIASRDFYCGWIKEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 TKIAVDTAAGPY@NHTVVFLGSEKGIILKFLARIGNSGFLNDSLFLEEMSVYNSEKCSYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TQIVVDRVDAEDGQYDVWFIGTDVGTVLXVVSVPKETWHDLEEVLLEEMTVFR.......
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
  53 53 N-LINKED (GLCNAC. ... (POTENTIAL).
125 125 N-LINKED GLCNAC. ... (POTENTIAL).
591 N-LINKED GLCNAC. ... (POTENTIAL).
772 AA, 88808 MW, 2409076127797220 CRC64.
                                                                                                                                                                                               94;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  593 AQEGYESRGGMLDWKHILDSPDSTDPLGAVSSHNHQDKKGVIRESYLK 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 772;
                                                                                                                                                                                         Matches 209; Conservative 104; Mismatches 251; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMAA MOUSE STANDARD; PRT; 772 AA.

008665; G62185; G62215;

00.MAY-2006 (Rel. 39, Created)

10-MAY-2006 (Rel. 39, Last sequence update)

15-SEP-2003 (Rel. 42, Last annotation update)

Semaphorin 3A precursor (Semaphorin III) (Sema III)
                                                                                                                                         15.7%; Score 858; DB 1; 32.3%; Pred. No. 1.3e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=NMRI; TISSUE=Embryo;
MEDLINE=95267431; PubMed=7748561;
Pueschel A.W., Adams R.H., Betz B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Sema D).
SEMA3A OR SEMAD OR SEMD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECUENCE FROM N.A.
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                         Ouery Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M3A
     ⊢
                                                                                                                                                                                                                                                                                              Ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the BMES cutstation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -- LYIAARDHIYTVD
                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 39-182 FROM N.A.

ROLLING I., Tin-Wollam A.M., Duckeis G.;

Submitted (JUN: 1938) to the EMBL/GenBank/DDBL databases.

Submitted (JUN: 1938) to the EMBL/GenBank/DDBL databases.

CORS. COULD SERVE AS A LIGAND THAT GUIDES SPECIFIC GROWTH CONES.

BY A MOTILITY-INHIBITING MECHANISM. BINDS TO THE COMPLEX NEUROPEIN-1/PLEXIN-. (BY SIMILARITY).

SUBCELLIAR LOCATION: Secreted (By similarity).

COMMAND STRONG BINDING TO NEUROPILIN IS MEDIATED BY THE CARBOXY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::
                                                                                                                                                                                                                  transmembrane and secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MIX. 603961. C. (extracellular: TAS. G.) GO:005576; C. (extracellular: TAS. G.) GO:005599; G. (extracellular: G.) G. (extracellular: TAS. G.) GO:005599; G. (extracellular: G.) G. (e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY.

N-LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE SEMAPHORIN FAMILY.
SIMILARITY: Contains 1 Sema domain.
SIMILARITY: Contains 1 immunoglobulin-like C2-type domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JB 1; Length 771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                             (2)
SEQUENCE OF 1-37 FROM N.A.
Woessner J., Minx P., Hinds K., Strowmatt C.;
Submitted (MAR-1998) to the EMBL/GenBank/DDBG databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9985F8D3EAED8456 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IG-LIKE C2-TYPE,
ARG/LYS-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15.6%; Score 852.5; 38.1;
liarity 32.1%; Fred. No. 2.9e-47;
Conservative 106; Mismatches 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEMAPHORIN 3A
                                                                                                                                                                    The semaphorin genes encode a family of growth cone guidance molecules."; cell 75:1389-1399(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44 HKPGRNTTQRHRIDIÇMIMIMUGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rotein; Glycoprotein
                                                                                                                                            MEDLINE=94094332; PubMed=8269517;
Kolodkin A.L., Matthes D.J., Good
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88889 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL, ACGC4451, -; NOT ANNOT
EMBL, ACGG4846, AAC78622.1;
PIR, D49423; D49423.
Genew, HGNC:10723; SEMA3A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL: 126081; AAA65938.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THIRD OF THE PROTEIN.
                                                                                                            TISSUE=Fetal brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                         SEQUENCE FROM N.A.
              1CBI_TaxID=3606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sevelopmental positions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
DOMAIN
DOMAIN
DOMAIN
DISCLFID
CARBCHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBCHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBCHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sest loca
Matches
              % THE TERM TO BE A TO BE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143 ICTYIEVGHHPEDNIFKLQDSHFUNGRGKSPYDPKLLTASJLIJGELYSGTAADFMGRJF 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83 ---VNIKDEQKIVWPVSYTRRDECKWAGKDILKECANFIKVLEAVNQTHLYACGTGAFFP 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196 VIYRSLGESPTLRTVKHDSKWLKEPYFVQA-----VOYSDYIYFFREIAVEYNTMGK 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200 AIFRTLGHHHPIRTEOHDSRWINDFRFISAHLIPESDNPEDDKYYFFFRENAIDGEHSGK 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260 ATHARIGOTOKNOFOG-HRSLVNKWTTFLKARLIOSVPGPRGIDTHF----BELGEVFL 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481 GVEDKRIMGMQLDRASSSLYVARSTCVIKVPLGRCERHGKCKKTCIASRDPYGGWIKEGG 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541 ACSHLSPNS-RLTFEQNIERONTNGLGECHNSFVALNGHSSSL----LPSTTTSCRTAQE 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       84 SHTEEIYCSKKLTWKSROADVOTCRWKGKH-KDECHNFIKVLLKKNDDALFVCGTNAFNP 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143 SCR----NYKKOTLEPFGDEF--SGMARCPYDAKGIANVALFAOGKLYSATVTOFLALDA 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243 VYFPRVAQVCKNDMGGSQRVLBKQWTSFLKARLNCSVPG----DSHFYFNILQAVTDVIR 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INGRO----WILATESTEYNSIEGSAVCAYDMLDIASVETGREKEOKSPOSTWTEVEDER 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEKERPGCCAGSSSLERYATSNEFEDDTLWFIKTHELMDEAVESIENRPWFLRIMVRYRL 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   373 VPYPREGICE-SKTEGGEDSTKOLPBDVITFARSHPAYYNPVFFINNRPIMIKTOVAVÇE 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 TKIAVDTAAGPYQNATVVFLGSEKGIILKFLARIGNSGFLNOSLFLEEKSVYKSEKCSYD 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          485 -- EPITISAMBLSTKQQQLYIGSTAGVAQLPUHRCDIYGKACAEGGLARDPYCAM--DGS 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541 SCSRYEPTAKRATARODIANG--DPLTHOSOLQHHOMHGPSLEERIIYGVENSSTELEC 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GKNNVPRLKLSYKEMLESNNVITFNGLANSSYHTFLLDERSRLYVGAKDALFSFNL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 314 MKSKÖPKAPIVYGVFTISSNIFKSSAVĆMYSMSDVRRVFLGFYAHRDGPNYQWVPY-QGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    432 TQIVVDRVDARDGQYDVMFIGTDVGTVLKVVSVPKETWHDLBEVILLBEMTVFR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                ; DB 1; Length 772; 2.76:47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 599 SPKSQRALVYWQFQRRNEDRKEET-RMGDHIIRTEQGLLLHSNQK 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative 102; Mismatches 257; Indels
                                                                                                                                                                                                                                                                          IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  596 GYESRGGMLDWKHLLDSPDSTDFLGAVSSHNHODKKGVTRESTTK
                                                                                                                                                                                                                                                                                                                 -> K (IN REF. 4).
E89A08528510ABC3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-WAY-2300 (Rel. 39, Created)
30-WAY-2300 (Rel. 39, Last sequence update)
15-SEP-2933 (Rel. 42, Last annotation update)
Semphorin 3A precursor (Semaphorin III) (Sema III)
N-LINKED GLCNAC.
N-LINKED GLCNAC.
H +> D (IN REF. I)
F -> G (IN REF. I)
F -> G (IN REF. I)
A -> G (IN REF. I)
BDRKE -> RRSKR IIN RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771 A.R.
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 853;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PR.7;
                                                                                                                                                                                                                                                                                                                                                    88739 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                15.7%;
32.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiers (Human)
                                                                                                                                                                                                                                                                                                                 623
772 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM3A_HUMAN
Q14563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                            CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                             CONFLICT
                                                                                                            CONFLICT
                                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEMA3A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ESULT 13
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Gaps

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479 RLANINHCASKTRC-KOCVELCOPHCAMDAKONLCVSIDIVTSYRFLIÇOVVRGDONKCW
                                                                                                                                                                                      i.
protein; Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 230; Conservative 130; Mismatches 270; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                C0734FE5B9C09FE3 CRC64;
                                                                                                                                                                                                                                                                                          CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                N-EINKED (GLONAC.
N-LINKED (GLONAC.
N-LINKED (GLONAC.
N-LINKED (GLONAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                             CB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3c-47;
                                                                                                                                                                                                                             POTENTIAL.
SEMAPHORIN LA.
EXTRACELLULAR (
institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                               15.5%; Score 845;
28.9%; Pred. No. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fred. No.
                                                                        EMBL; L26C80; AAA16609.1; -...
InterPro; IPRC03659; Ploxin-like.
InterPro; IPRC02659; Ploxin-repeat.
InterPro; IPRC02667; Sema.
Pfam; PF01437; PSI; i...
SYART; SMC0423; PSI; i...
SWART; SMC0630; Sema; i...
SMART; SMC0630; Sema; i...
SYART; SMC0630; Sema; i...
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79751 MW;
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                                                                                                                      137 EHPICTY: BIGHERBEDNIFKLENSHFBNGRGKSPYDPKLLTASLLIDGELYSGTAADFKG 196
                                                                                                                                                                                                                MGKVVFPRVAQVCKNDMGGSQRVJEKQWTSFLKARLNCSVPG----DSHFYFNILQAVTD 301
YQNGKNNVPRIKLSYKEMLESNNJITFNGLAMSSSYHTFLLDEERSRLYVGAKDHIFSFD 81
                                                           L-----VNIKDFOKIVWPVSYTRRDECKWAGKDILKECANFIKVLKAYNCTHLYACSTGA
                                                                                         FNPSCR----NYKMDTLEPFGD3F--SGMARCPYDAKHANVALFADGKLYSATVTDFLA
                                                                                                                                                                                 RDFAIFRTIGHHPIRTECHOSRALNOPKFISAHLISESDNPEDDKVYFFFRENAIDGEH
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                                IDTSHTEEIYCSKKLTWKSRQADVDTCRWKGKH-KDECHNFIKVLLKKKNDDALFVCGTNA
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Polyphaga, Cucujiformia,
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-:- SUBCRELULAR ICOATION: Type I membrane protein.
-:- SIMILARITY: BELONGS TO THE SEMAPHORIN FAXILY.
-:- SIMILARITY: CONTAINS 1 SEMA domain.
                                                                                                                                                      193 IDAVIYRSIGESPTIRTVKHOSKALKBPYFVÇA-----
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30-MAY-2000 (Rel. 39, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation updat
Semaphorin 1A precursor (Semaphorin-I).
SEMA.1 OR TSEMA.1
Tribolium confusum (Confused flour beetle).
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Neoptera, Endopterygota, Coleoptera, Polyp
Tenebrionidae, Tribolium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kolodkin A.J., Matthes D.J., Goodman C.S.
"The semaphorin genes encode a family of
growth cone guidance molecules.";
Cell 75:1389-1399 (1993)
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MEDLINE=94394332; PubMed=8269517;
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
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---TDGLGDCHNSFYALWGRSSSLLPSTTTSDSTAÇEGYESAGGYLDWKHLLUSFDSTDP 618
                                                                  LGAVSSHNHQDKKGVIRESYLKG.--HDQLVPVT--LLALALAVILAFVAGA---VFSGITV 670
                               538 SPQTOXXTVTXVX ------PSEVENETT------NSIDEXEL-- DSSCT STR
                                                                                                LIKTGLDDDSDCCPV-SENSIGGCAVRQQLVIYTAGTLHTVVVVVSIVGLFSWLYSGLSV 651
                                                                                                                                                        632 FAKFHSDSQYPEAFFIEQHNHLERUSANQTGYLTPRANKAVKUNVKVSSSTPRPKKDNLD
                                                                                                                                   671 YOV--CDHRRXOVAVVQRKE--KBLTHSRRGSMS-SVTKLSGLFGDTQSKDFKPEALLTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostori;
Actinopterygii; Neopterygii; Teleoster; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
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SWART; SM00409; IS; 1.
SWART; SM00409; PS; 1.
SWART; SM00610; Sema; 1.
PROSITE; PS50813; IG_LIKE; 1.
Signal; Immunoglobulin domain; Multigene family; Nourogonesis; Developmental protein; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                     30-WAY-2000 (Rel. 39, Created)
10-WAY-2000 (Rel. 39, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
15-SEP-2003 (Rel. 42, Last annotation update)
SEMPAIR DR SEMAIAB:
SEMAIR DR SEMAIAB:
STACHYdamio rerio (Zebrafish) (Damio rerio).
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InterPro; IPR03006; Ig-MRC; InterPro; IPR03069; Plexin-like.; InterPro; IPR031659; Plexin-repeat.; InterPro; IPR051657; Sema.
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fam; PF01437; PSI; 1
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NCBI_TaxID=7955
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413 PVFFILMHPILIKTDVDYQFTQIVVDRVEABDGGYDVMFIGTDMGTVLKVVSIPRGTMHD 472
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                                                                                                                                                                                                                                                                                                      74;
                                                                                                           BY SIMILARITY. (POTENTIAL)
M-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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                                                                                                                                                                                                                                                  Score 845; DB 1; Length 778;
Pred, No. 9e-47;
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ARG/LYS-RICH (BASIC)
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QBbaff mis misculu
QBbaff mis misculu
QBbff mis misculu
QBv7q7 drosophila
QBmff drosophila
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QBy788 drosophila
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Q8bxu8 mus musculu
Q8tdv7 homo sapien
G8tb71 homo sapien
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EMBLOL CHEM. 275:39647-39653(2000).
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homo sapien
homo sapien
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 IMIMOGLY1BARDHIYTVDIDTSHTBEIYCSKKLTWKSRQADVJTCRWKGKHKDECHNF 120
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Q96jf8 homo sapien
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NGSI_TaxID=3606;
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                                 Homosaptens (Human).
Eskaryota, Metazoa, Chordata, Craniata, Vertebrata, Butele
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                241 VEYNIYGKVV?PRVAQVCKADAGGSQRVLEKQWISFLKARLNCSVPGDSHFYFNILGAVI
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"MEDUNE=2064539; PubMed=1099389; Mill C.;
KIOSTEERMAN A., Lutz B., Gettler F., Behl C.;
Klostermann A., Lutz B., Gettler F., Behl C.;
Klostermann A., Lutz B., Gettler F., Behl C.;
The orthologous human and merine semaphorin 6A-1 proteins (SSMAGA-1) Find to the Enabled/Vasodilator stimulated phosphopronen.

1/Sema6A-1) bind to the Enabled/Vasodilator stimulated phosphopronen.

1/Sema6A-1) bind to the Enabled/Vasodilator stimulated domain.",

J. Biol. Chem. 275:5647-39631 (2000).

EMBL AF288666; AAG2944.1;

EMBL AF288666; AAG2944.1;

InterPro; IPR001627; Sem46.
                                                                                          LOGKRKPSRGSREWERNONLINACTKEMPPRSSPVIPTDLPLRASPSHIPSVVVLPITQO
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Solurognath, Muridae, Murinae, Mus
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01-MAR-2001 (TrEVBLrel: 16, Created)
01-MAR-2001 (TrEXBLrel: 16, Last sequence update)
01-MAR-2003 (TrEMBLrel: 23, Last annotation update)
Axon quidance signal SEVA6A1.
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Mammalla; Eutheria; Rodontia;
NCBI_TaxID=10090;
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HOMO Sapiens (Huran).
Eukaryota, Motazoa, Chordata, Craniata, Vertebrata, E
Mammalia, Eutheria, Primates, Catarrhini, Hominidae,
NCBI_TaxID=9606;
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SEQUENCE FROM N.A.
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MMA-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein FL014749.
Hypothetical protein FL014749.
Hypothetical protein FL014749.
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eureleoshomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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Hypothetical protein.
SEQUENCE 574 AA, 62822 MW, 0C79E01A4117A495 CRC64;
661 YNSLTRSGLKRTPSLKPDVPPKPSFAPLSTSMKPNDACT
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the FANTOM Consortium,
the FIXEN Genome Exploration Research Group Phase I & II Team,
the FIXEN Genome Exploration Research Group Phase I & II Team,
the FIXEN Genome Exploration of Consortium Continual annotation
to full length cDNAs.,
Nature 420:563-573 (2022).
BENEI, AK042751; BAC11351...
SEQUENCE 605 AA, 68299 MW, B4FE713BE8AF6E90 CRC64;
                                                                                                                                                                                                                               Euteleostomi; Mirinae: Mus
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Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae,
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                                                                                                                Created)
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Sext Local Similarity 94.5%; Fred. No. 2.8e-232;
Malches 550; Conservative 14; Mismatches 18;
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                                                                                                                                                                                                                                                                                                                                                  STRAIN=C57BL/67; TISSUE=Cerebellum;
MEDLINE=22354683; PubMed=12466851;
                                                                                                            01-WAR-2003 (TYEMBLYEL: 23, 01-WAR-2003 (TYEMBLYEL: 23, 01-WAR-2003 (TYEMBLYEL: 23,
                                                                                                                                                                                                            musculus (Mouse)
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annotation
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Mammalia; Eutheria; Rodentia, Sciurognathi, Muridae, Murinae; Mus.
VCBI_TaxID=10090;
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STRAIN-CS7BL/6J; TISSUE=Cerebellum;
MTDLINE=22354683; PubMed=12466851;
The FANTOM CONSOLTIUM;
The PANTOM CONSOLTIUM;
The RIEN Genome Exploration Research Group Phase 1 % 11 the RIEN Genome Exploration Research Group Phase 2 % 11 "Analysis of the mouse transcriptome based on functional 60,770 (2011). Length CDNAs";
Nature 420:663-573 (2002)
Nature 420:663-573 (2002)
BMBL; AKOS2711; BAC38852.1;
SEQUENCE 587 AA; 66044 MW; RE9CTB102C4DB97A CRC64;
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95.1%, Proc. No. 1.8e-232,
vative 13, Mismatches 15,
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SGLKRTPSLKPDVPPKPSFAPLSTSMXPNDACT
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54.18; Score 2947; DB 4; 99.3%; Pred. No. 3.4e-231; ative 1; Mismatches 0;
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A Nishikawa Ti, Nagai K., Sugiyama Ti, Otduki Ti, Suzuki Y.,
A Nishikawa Ti, Nagai K., Sugano S., Shiniaci A. Sudo Hi.
A Wagatsuma M., Roschi T., Kacano S., Shiniaci H., Kondo H., Sugawara M.
A Watanabe S., Kimura K., Mirakami K., Ishin S., Kawai Y., Takiguchi S.,
A Watanabe S., Kimura K., Mirakami K., Ishin S., Kawai Y., Salto K.,
A Nimomiya K., Iwayanagi Ti,
A Nimomiya K., Iwayanagi Ti,
China Colling Dioject.",
Bubbited (MAY-2011 to the EMSJ/GenSank/DDC databases.
R EMSJ, AKOZY471; BABSSJ.801;
R RITERPO: IPR003659; Plexin-like.
R RITERPO: IPR003659; Plexin-like.
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Matches 562; Conservative C; Mismanches C; Indels
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30-DEC-2001 (TrEMBLrel. 19, Last sequence update)
30-MAR-2003 (TrEMBLrel. 23, Last sequence update)
Hypothetical protein FLJ14565.
Homo sapiens (Human)
Bukaryota, Merazoa, Chordata, Crániata, Vertebiata, E
Nammalia: Euthoria, Primates, Catarrhin; Hominidae, Nole
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                                     96SY4
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ANOSFGRGDNPPPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTFSLKP 1006
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KPSRGSREWERNONLINACTKDMPPMGSPVIPTDLPLRASPSHIPSVVVLPITQQGYQHE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : MSVYNSEKCSYEGVEDRAMSLDRASSLYVAFSTCVIXVPLGRCERHGKCKKTCTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           589 SDSTAGEGYBSRGGMLDWKHLLDSPOSTOPLGAVSSHWHODKKGVIRESYLKGHDOLVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TLAIAVILAFVMGAVFSGITVYCVCDHRRKDVAVVQRKEKBLTHSRRGSMSSVTKLSGL
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                                                                                                                                                                                                                                                                                    Sogai T. Ota T., Nishikawa T., Hayashi K., Otsuki T., Sugiyama T. Sogai T., Sugaro S., Ishii S., Kawai-Hio Y., Saito K., Yaramoro J., Wakamatsu A., Navaria Y., Kojima S., Nagahari K., Masuloo Y., Ono T., Okonikawa Y., Actsuka S., Sasaki K., Hattori A., Ckumura K., Iwayaragi T., Ninomiya K., Submitted (MAR-2002) to the EMEJ/GenBank/DDBJ databases.
01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2002 (TrEMBLrel. 22, Last annotation update)
Hypothetical procesh FL090494.
Hymo sapiens (Human)
Elikaryotae Metazoa, Chordata, Craniata, Verrebrata, Euteleostomi, Mammašila, Eutheria, Primates, Cataxranni, Hominidae, Homo.
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SEQUENCE 562 AA; 61286 WW: 708041459E34D78A CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YRLTKIAVDTAAGEVÇNETVVELGSEKGIILKELARIGNSGF-LNDSLELEEMSVYNSEK 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AVTEVIRINGADVVLATESTEYNSIEGSÄVCAYDMLDIASVETGREKEÇKSPESTWTEVP 357
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59 FÇLMLKIRDTLYIAGRDÇVYTVNLNEMPKTEVIPNKKLIWRSRÇÇDRENCAMKGKHKDEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUPIKULIKKNODALFVGTNAFUPSCRNYKMDTLEPFGDEFSGMARCPYDAKHANVALF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADGKLYSATUTDELAIDAVIYASLGESPITLRTVKHOSKWLKEPYFVÇAVDYGDYIYFFFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BIAVEYNTMGKVVFPRVAQVCKNDMGGSQRVLEKQWTSFLKARLNCSVPGDSHFYFNILO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DERVPKPRPGCCAGSSSLERYATSNEFPDDTLNFIKTHFLMDEAVPSIFNRPWFLRTMVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSKVPKPRPRGCAKHGLAEAYKTSIDFPDETLSFIKSHPLMDSAVPPIADEPWFTKTRVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YRITAISVDHSAGPYQNYTVIFVGSEAGHVLKVLAK--TSPFSINDSVILEEIEAYNHAK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537 KEGGACSHLSPNSRLT-FEQDIERGNTDGLGJCHNSFVALNGHSSSLLPSTTTSDSTAGE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -YKIFGGPTSEMEVSSSSVTTMASIPETTPKVIDIWRPKLISSRKFVVODDPNISDFTDP
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                                                                                                                                                                            Eureleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1073;
                                                                                                                                                                        Craniata, Vertebrata, Lucio
Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                08NFY4;
01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-NAR-2003 (TrEMBLrel. 23, Last annotation update)
Semaphorin 6D isoform 4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     43.4%; Score 2368; DB 4;
46.0%; Pred. No. 1.5e-183;
                                                                                                                                                      Homo sapiens (Humam)
Eukaryota, Metazoa) Chordata;
Mammalia; Ettieria; Primates;
NGBL_TAXID=9606;
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R EMB./ AKO27439; Bab55111... - ...
InterPro; IPR003659; Plexin-like.

R SMART: SMO453; PSI; 1.
Hypothetical grotein.

SEQUENCE SO7 AA, S5464 XM; 8CC567B438CS1B39 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MSVTMSEKCSYBGVEDKRIMGMQLDRASSLYVAFSTCVIKVPLORCERHGKCKKTGIAS
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096T04 PREJEXINARY, PRT; 507 AA.
C96T04;
C96T04;
C1-DSC-2001 (TEXBLrel. 19, Created)
01-DSC-2001 (TEXBLrel. 22, Last annotation update)
01-NAR-2003 (TEXBLrel. 22, Last annotation update)
Hypothetical protein FJJ14533.
Homo sapiens (Huran).
Bukaryota, Metazoa; Chordata; Creniana, Verrebrata; Buteleostom;
Mammalia; Eutheria; Frimates; Catarrini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cuery Match

48.1%; Score 2621.5; DB 4; Length 507;
Best Local Similarity 90.2%; Pred. No. 9.9e-205;
Matches 507; Conservative 0; Mismatches 0; Indels 55;
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                                                                                                                                                                                                           SEQUENCE FROM N.A.
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639 1SG1	NEYS QUILT 12 QUINTYS, QUINTYS, CLOCT-2002 (TREMBAREL, 22, Last sequence update) 01-007-2002 (TREMBAREL, 22, Last sequence update) 01-007-2002 (TREMBAREL, 22, Last sequence update) 01-007-2002 (TREMBAREL, 23, Last sequence update) 01-007-2002 (TREMBAREL, 23, Last sequence update) 01-007-2002 (TREMBAREL, 23, Last sequence update) 01-007-2003 (TREMBAREL, 23, Last semostation update) 01-007-003 (TREMBAREL) 02-007 (TREMBAREL) 03-007 (TREMBAREL) 0	MRSEALLYFILLHFAGAGFEDSEFISISHGNYTKCYPFVGHKEGRNTTCREHLD 57 1 1 1 1 1 1 1 1 1

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                                         NSNAHKAEKKI, CNI DIIPLIKSSSKRDHRRSVDSRNTI - - NDLLKHLNDPNSNPKAIMGDI 825
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                                                                                                                                                                                                                                      PSGQAVTVSRQPSIMAYMSII. ...--RSGIKRTPSIKPDVPPKPSFAPLSTSMKP 1025
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                                                                                                                     CHAHONLMID PMGSMSEV PPKVPNREASLYSPSSTLPRNSPTKRYDVPTTPGVPMTSLER
                                                                                                                                                              KASYFINSLIRSHQATTLKRNNINSSNSSHJSRNQSFGRGD-NPPPAPQRYJSIQVHSSQ
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                                                                                                                                                                                                                                                           complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukarycia; Metazca; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                ---HOVNLVENLDSE----PPKVPQREASLGPPGASESQTGESKRLEMHSSSY---
    -----VDQP---KKSEVAQMALEDQAATLEYKTIKEHLSSKSPN-
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TISSUE-Brain)

TO SUBJECT SEARCH Y., YO Y., Tang F., He F.,

"Home sapiens semaphorin 6D isoform 1 (SEMAGD.1) mRNA, or

Submitted (JUN-2001) to the EMBL/GenBank/DDBG databases.

EMBL, AFS 199430. AAM64453.1.

InterPro) 199401627, Sema.

InterPro) Sema; 1.

SNART: SMO0630. Sema; 1.

SNART: SMO0630. Sema; 1.

SNART: SMO0630. Sema; 1.

SQUENCE 1011 AA, 113289 MW, 906B6B3633941B89 CRC64;
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Last sequence update)
Last annotation update:
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al Similarity 45.4%; Pred. No. 3.5e-179;
494; Conservative 155; Mismatches 292;
                                                                                                                                                                                                                                                                                                                                                                                                                 01-00T-2002 (TrEMBLEE), 22,
01-00T-2002 (TrEMBLEE), 22,
01-MAR-2003 (TrEMBLEE), 23,
Semaphorin 6D isoform 1.
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                                                                                                      complete
                                                                                                                                                                                                                                                                                                    135;
                                                                                                                                                                                                                                                           Query Match 42.5%; Score 2315.5; 05 4; Length 998; Best Local Similarity 45.8%; Prod. No. 2.69-179; Matches 493; Conservative 155; Mismatches 293; Indels 135;
                                                       TISSTE-Brain;
Ou X., Zhai Y., Wei H., Yn Y., Tang F., He F.,
Ou X., Zhai Y., Wei H., Yn Y., Tang F., He F.,
Ou X., Zhai Y., Wei H., Yn Y., Tang F., He F.,
Homo sapiens serabdoin 6D isolorm 2 (SEMAGO.2) makh, co
submitted (JUN-2001) to the FMBL/GenBank/hhBC databases.
EMBL, AF389427, AAM69460.1, -..
InterPro; IPR061627; Sema.
Pfam: PF01403; Sema. 1.
SMART; SM0630; Sema. 1.
SEQUENCE 998 AA: 111730 MM; 3F46D6672E8D5344 GRC64;
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                                         SEQUENCE FROM M.A.
NCBI_TaxID=9606;
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298 AVTOVIRINGROVVLATESTRYNSIEGSAVCAYOMLDIASVRIGREKEOKSPDSTWTEVP
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                                                                                                                                                                                                                                                                                                                       1 MRSEALLLYFILL---HFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQRHRLD
                                                                                                                                                                                                                                                                                                                                                                       MRVF11CAYILLLMVSQLRAVSFPEDDEPLNTVDYHYSRQYPVFRG-RPSGNESQ-HRLD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238 BIAVEYNTMGKVVFPRVAQVOKNOMGGSQRVJEKQWISFLKARINOSVPGDSHFYFNILQ
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42.5%; Score 2314; DB 4;
Best Local Similarity 45.4%; Pred. No. 3.5e-179;
Matches 494; Conservative 155; Mismatches 292;
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InterPro, IPRC01627, Sema.
Pfam, PFC1403, Sema, I.
SYART, SMC0423, PBI, I.
SYART, SMC0630, Sema, I.
Hypothetical protein.
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MEDLINE=20277482; PubMed=1081933;
Nagase ".., Xikuno R., Ishikawa X., Chara D.,
Nagase ".., Xikuno R., Ishikawa X., Inidentified human
genes.xvII.The complete sequences of inidentified human
genes.xvII.The complete sequences of 100 new cDNA clones K
which code for large proteins in vitro.",
DNA Res. 7:143-150(2000).
EMBL, AB04092.3, 3AA96001.2; "...
InterPro,*IPR003659; Plexin-like.
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01-CCT-2001 (TYEMBLEG). 18, Last segmence update.)
01-MAR-2003 (TYEMBLEG). 23, Last annocation update)
KIAA4479.
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B37 DPNSNPKAIMODIQMAHQNIMLDEMGSMSEVIERVPRHEASINGSPGETERARSPTARVON 896
907 HHSSSV---GVUYKRSYPETNSUTERHOATTLKENNINGSNSHLGRNOSFORGE-NEPPR 962
997 PTTPGVPHTSLERGRGYHKNSSOF-HSISAMPK-NLNSPHGVLLSRQSSMNRGOMMETPT 954
963 PGRVDSIDVHSSGPSGQAVTVSRQPSLNAMPKLT---RSGHKRTPSLKPDVPPKPSF 1017
1017 APLISMKP 1025
1017 APLISMKP 1025
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0 1008 VPQTFSVRP 1016
earch completed: October 23, 2003, 17:12:38
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| SIDSI/gcgdata/geneseq/geneseqp-embl/AA1380.DAT:*
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| SIDSI/gcgdata/geneseqfy-embl/AA4381.DAT:*
| SIDSI/gcgdata/geneseqfy-embl/AA1381.DAT:*
| SIDSI/gcgdata/geneseqfy-embl/AA1385.DAT:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd
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AAB50731
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ALIGNMENTS

AAY71460 standard, Protein, 1030 AA

AAY71460,

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T 04-OCT-2000 (first entry)

X Human semaphorin 6A-1.

X Human; semaphorin 6A-1.

Human; semaphorin 6A-1, (HEA)SENA6A-1; neuronal development; apoptosis; neuronal regeneration; End/VASP protein family; immunomodulatory;

R cent therapy; diagnostic agent; therapeutic agent; differentiation;

C cytoskeletal stabilisation; plasticity.

X Homo sapions.

Homo sapions.

Home = "Zoxin-like domain that selectively binds to members of enalyasite 959...961

T anding-site 957...961

Finaling-site 957...961

Finaling-site 957...961

Finaling-site 1009...014

T anding-site 1009...014

Finaling-site Published motif for members of Ena/VASP protein family, especially Ev!"

T Enal/VASP protein family, especially Ev!"

T Enal/VASP protein family, especially Ev!"
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WO200031252-A1

C2-JJN-2000

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GVEDKRIMGMQLDRASSSIYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWIKEGG
                                                      ### ACSHLSFNSRLTFEQDIERGNTDGLGDCHNSFVALNGHSSSLLPSTTTSDSTAQEGYESR
                                                                                                   GGMIDWRHLIDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVFVTLLATAVILAFV
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                                   ACSHLSPNSRLTFEQDIERGNTDGLGDCHNSFVALNGHSSSLLPSTTTSDSTAQEGYESR
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inc MJ;
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V, Agostino
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Spaulding V, A
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Bowman MR,
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Treacy M,
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N-PSDB; AAF98469.
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Merberg D,
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                                                                                                                                                                               Nucleic acid coding for human semaphorin 6A-1 used as diagnosino agent, therapeutic agent, for modulating immune system, in gene therapy or for
                                                                                                                                                                                                    therapeutic agent, for modulating immune system, in gene therapy of for 
offecting differentiation, cytoskeletal stabilization and/or plasticity
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100.0%; Pred. No. 0;
ive 0; Mismatches
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                                 98EP-0122441
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Best Local Similarity 100.
Matches 1030; Conservative
                                                                                                   Klostermann A;
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N-PSDB; AAD01233.
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                                 26-NOV-1998;
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AILIPLWHNGKLATPONTAKMILKADQHHIDLIALPTPESTPTLQQKRKPSRGSREWERN 780
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606 MGAVESGITVYCVCDHRREDVAVVQRKEKELTHSRRGSMSSVTKLSGLFGDTQSKDPKPE
                                                                     ALLIPELMHNGKEAUPGNIARMEIKADQHHIDLIALPIPESIPILQQKRKPSRGSRBWERN
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, human adult brain and human adult
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Treacy M,
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foetal brain, human adult testes,
salivary gland cDNA libraries
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96US-0769192.
97US-0783401.
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aulding V,
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13-JAN-1997,
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Racie DA, 1
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                                                                                    Human CDNA clones represented in AAF98374 - AAF99489 encode secreted proteins AAB96667 - AAB90750. The CDNA clones are isolated from various tissue of presseries and may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate procedur expression. The polypeptides and modeler acids may be used as mutitents or to modulate of yockine and cell proliferation/differentiation activity and may also be involved in rodulation of the immune system. The CDNA sequences, proteins, their agenists and/or aniagonists exhibit haematopolesis regulating activity, issue growth activity, activit/Amibin activity, chemotratic/Gremokinetic activity, andi-inflammatory activity, andior activity, andi-inflammatory activity, andior theometrapopolesis activity, andi-inflammatory activity, andior tunnour inhibition activity. Included in the invention activity, andior represented in AAF98490 - AAF98572 which are specific for the CDNA clones
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Suppressing activity, hematopolesis regulating activity, tissue growth activity, activin/inhibin activity, chemotactic/chemokinetic activity, hemotactic/chemokinetic activity, hemotactic/chemokinetic activity, activity, receptor/ligand activity, anti-inflammatory activity, adherin/tumour invasion suppressor activity, end other activities.
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PAPCRVESIQVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTFSLKPDVPPKPSFAPLS 1020
Sequences AAB23029-B23048 represent human SECX proteins. The SECX proteins of the invention are either secreted or membrane-associated proteins and act as regulator of cellular proliferation and differentiation. SECX proteins or nucleotides are useful for diagnosing the presence of, or predisposition to, a disease associated with altered levels of SECX proteins and nucleotides. The SECX proteins are also useful to screen compounds that modulate SECX activity or expression. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AIDS;
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                                                                                                                                                                                          skin disorder, cardiovascular disorder, atherosclerosis, restenosis, neurological disease, Alzheimer's disease, trauma, wounding, spinal ooki disual disease, addera, cytostatic, immunosupressive, anti-HIV, antiinflammatory, antiarthritic, antiarteriosclerotic, europrotective, vilnerary, antiallergic, antimicrobial, cardiant, dermatological; gene therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         semaphorin protein-like splice variant, SECX 2864933-1.
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06-MAR-2000; 2000US-0123667.
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probes are useful for detecting the presence of SECX nucleotides and for screening tissue cultures for contamination. Diseases that may be treated or prevented using SECX proteins or nucleotides include ancer (e.g., colorectal carchinea, proseate cancer), benign tumours, immune diseases, transplant rejection, allergies, ALDS: infections, inflammatory diseases, transplant rejection, allergies, ALDS: infections, inflammatory diseases, arthritis, anemaropoisatic disorders, skin diseases, cardiovascular disorders, atheroscierosis, restonosis, neurological diseases (e.g., Allereimet's disease), trauma (e.g., surgical or traumatic wounds, spinal cord injury), and skeletal
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939 AA

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                                                                                                                                                                                                                121 IXVLLKKNDDALFVCGTNAFNPSCRNYKYDTLEPFGDEFSGMARCPYDAKHANVALFADG
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                             Length 939;
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                          90.3%; Score 4921; DB 21;
99.6%; Pred. No. 0;
tive 2; Mismatches 2;
                           90.3
Best Local Similarity 99.5
Matches 928, Conservative
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proteins of the invention are either secreted or membrane-associated proteins of the invention are either secreted or membrane-associated proteins of the invention are either secreted or membrane-associated of proteins and act as regulator of caliular profileration and differentiation. SECX proteins or uncleonides are useful for diagnosing the presence of, or predisposition to, a disease associated with altered the process of SECX proteins and uncleonides. The SECX proteins are also useful to screen organish that modulate SECX activity or expression. The insertion of a SECX protein with other cellular proteins may be useful to modulate the activity of a partner protein, cellular profileration, cellular cellular profileration, cellular cellular profileration, cellular cellular profilerati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proliferation regulator; differentiation regulator; non-malignant turnour; proliferation regulator; differentiation regulator; non-malignant turnour; limine disorder; automame disease; transplant rejection; allegy, AIDS; infection; inflammatory disorder; atthribis; haematopoletic disorder; skin disorder; cardiovascular disorder; attherosclerosis; restencis; neurological disease; Alzheimer's disease; trauma; wounding; spinal cord injury; skeletal disorder; oytostatio; immunosuppressive; anti-inflammatory; anti-atthribic; anti-atteriosclerobic; neuroprotective; vulnerary; anti-allergic; anti-atteriosclerobic;
                                          841 MALEDQAATLEYKTIKEHLSSKSPNHGVNLVENLDSLPPKVPQREASLGPPGASLSQTGL 900
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MALEDQAATLEYKTIKEHLSSKSPNHGVNIVENLOSIPPKVPQREASLGPPGASLSCTGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            jc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human semaphorin protein-like splice variant, SECX 2864933-2
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                                                                                                                                                      901 SKRLEWHHSSSYGVDYKRSYPINSLTRSHLTT
                                                                                                                    SKRLEMHHSSSYGVDYKRSYPTNSLTRSHQAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dermatological; gene therapy
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08-MAR-2000; 2000US-0123667
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colorectal carcinoma, prostate cancer), benign timcurs, immune disorders (including autoimmune diseases, transplant rejection, allergies, AIDS), infections, inflammatory disorders, arthritis, haematopoietic disorders, skin disorders, cardiovascular disorders, atheresoclerosis, restenosis, neurological diseases (e.g., Alzheimer's disease), trauma (e.g., surgical or traumatic wounds, spinal cord injury), and skeletal
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Pred. No. 0;
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873; Conservative
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The present invention describes primer sets for synthemising 56.2 comprises: (a) an oligo-dr primer an oligo-drught cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-dr primer an oligo-drught complexitied complementary to the complementary strand of a polynucleotide which comprises one of the $5.2 nucleotide which comprises one of the $5.2 nucleotide comprising a sequence complementary to the complementary strand of a polynucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the comprises and polynucleotide comprises a 5'-end sequence and an oligonucleotide comprises a 5'-end object of the which comprises a 1'-end sequence complementary to a polynucleotide comprises at least 15 nucleotides and the combination of the 5'-end sequence for an oligonucleotide comprises at least 15 nucleotides and the combination of the specification. The primers are useful for synthesising polynucleotides, are specification. The primers are useful for synthesising polynucleotides, contraction and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers are also useful for the contraction and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers and primers are also the full-length cDNAs. The primers allow obtaining of the full-length cDNAs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB95893 represent human amino acid sequences, and AAH13629 to AAH13632 represent ciigonuciectides, ali of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNAs easily without any specialised methods. AAH03166 to AAH13628 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primer sets for synthesizing polymucleotides, particularly the 5602 full-length or EDNs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length CDNs.
                                                                                                                                                                                                                                                                                             detection; diagnosis; antisense therapy; gene therapy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH13633 to AAH18742 represent human cDNA sequences; AAB92446 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yamamoto
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, Otsuki'
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Pred. No. 1.6e-310;
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A, Nagai K,
SKRLEMHHSSSYGVDYKRSYPTNSLTRSHOAT
                                   SKRLEMHHSSSYGVDYKRSYPTNSLTRSHLTT
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Sugiyama T, Wakamatsu A,
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                                                                                                                                     standard; Protein; 699
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100.0%;
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11-JAN-2000; 2000JP-0118776.
02-MAY-2000; 2000JP-0193767.
09-JUN-2000; 2000JP-024.8999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUL-2000; 2000EP-0116126
                                                                                                                                                                                                                                                          protein sequence SEQ
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27-AUG-1999;
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process of the invention are either secreted or memorane-associated process and act as regulator of cellular proliferation and alferentiation. SECX proteins or mucleotides. The SECX proteins are also the presence of, or predisposition to, a disease associated with altered useful to screen compounds that modulate SECX proteins are also to medilate the activity of a partner protein, cellular proliferation. The compliant differentiation and cell survival. SECX mucleotides are useful for the recombinant expression of SECX protein, and may be used to collular differentiation and cell survival. SECX mucleotides are useful for the recombinant expression of SECX protein, and may be used detect SECX expression of SECX protein, and may be used to modulate SECX expression of SECX protein, and cell or tissue collular profession of SECX proteins and in forensic biology. SECX primers or probes are useful for detecting the presence of SECX nucleotides and for screening tissue cultures for containation. Diseases that may be treated or protein also useful for detections, including autoimmune diseases, transplant tumours, include cancer (e.g. of ordered actions, inflammatory disorders, arthritis, haematopoletic disorders, stinding actions, inflammatory disorders, arthritis, haematopoletic disorders, stinding actions, inflammatory disorders, arthritis, haematopoletic disorders, surgical or traummatic wounds, spinal cord injury), and skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TNAFNSCRAYKMOTLEPFSDEFSGMARCPYDAKHANVALPADGKIYSATVTDFLAIDAV 180
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                                                                                                                                                                                                                                                                                                                                                                                   Novel human membrane associated or secreted polypeptides and polymorolettides useful for diagnosis, prevention and treatment pathological states such as canner, immine, cardiovascular and neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequences AAB23029-B23348 represent human SECX proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 3373; DB 21;
Pred. No. 3.8e-284;
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                                                                                                                                                            09-MAR-1999; 99US-0123667
08-MAR-2000; 2000US-0123667
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N-PSEB; AAA93630.
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                         WC200053742-A2
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                                            MIDIASVETGREKEÇKSPOSTWIPVPDERVERPGCCAGSSSJERYATSNEPDDTLNF 391
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                                                                                                                                     IKTHPLMDBAVESIENREMELATIVKYRLITKIAVDTAAGPYQNBTVVEUSSEKGIILKEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPSVVVLPITQQGYQHEYVDQPKMSEVAQMALEDQAATLEYKTIKEHLSSKSPNHGVNLV
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                                                                             6. IKTHPLMDBAVPSIFNREWHIATVVRYRUTKIAVDTAAGPYONHTVYFUGSBKGIILKFL
                                                                                                                                                                                                                                                                                                                    LORCERHGKCKKTGIASREPYGGMIKEGGAGSHISENSRITERQDIERGKTDGIGDGHNS
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Saps
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Mismatches
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Matches 699;
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Indels

Length 630;

257 VCKNDMGGSQRVLEKQWISFLKARINCSVPGDSHFYFNILQAVIDVIRINGRDVVLAIFS 316

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dermatological; gene therapy.

Homo sapiens

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organic equiperon of a polynuclectide which complished a Squence complementary to the complementary strand of a polynuclectide which comprises a 5'-end sequence and an oligonic equiperon of the comprises a 1'-end sequence, where the oligonic equiperon of the comprises at 1'-end sequence, where the comprises at 1'-end sequence, where the combination of the Specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly tuil-length collas. The primers are also useful for the cultication and/or diagnosis of the abnormality of the proteins encoded by the full-length collas. The primers allow obtaining of the full-length collas easily without any specialised methods. AAH01861 and AAH01862 and AAH018631 to AAH01862 to AAH018631 represent thursh amino acid sequences; and AAH0362 to AAH03631 represent pligonuclectides, all of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                            398 MOEAVPSIENRPWFLRTMVRYRITKIAVOTAAGPYQNHTVVFLGSEKGIILKFLARIGNS 457
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Matches 574; Conservative
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                                                                                                                                 RYATSNEFPDDTLNFIKTHPLMDEAVPSIENRPWFLRTMVRYRLTKIAVDTAAGFYONHT 436
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VVFLGSEKGIILKFLARIGNSGFLNDSLFLEEMSVYNSEKCSYDGVEDKRIMGMQLDRAS
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                                                                                                                                                           VVFLGSEKGIILKFLARIGNSGFINDSLFLEEXSVYNSEKCSYDGVEDKRIMGMQLDRAS
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Otsuki
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A, Nagai K,
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Wakamatsu
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27-JAUG-1899, 99JP-0302253.
11-JAN-2500, 200JP-0118776,
12-MAY-2500, 200JP-018776,
09-JUN-2500, 200JP-0241899.
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  SDSTAQEGYESRGGMLDWKHLLDSPDSTDPLGAVSSHWHQDKKGVIRESYLKGHDQLVPV
                                      SDSTAOEGYESRGGMLJWKHLLJSPDSTDPJGAVSSHNHCDKKGVIRESYLKGHDCLVPV
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                                                                                                     FOUTOSKOPKPEALLTPLYHNGKLATPGNTAKYLIKADQHHLJJTALPTPESTPTLQOKR
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                                                                              TLLAIAVILAFVMGAVFSGITVYCVCDHRRKDVAVVQRKEKELTHSPRGSMSSVTKLSGL
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S, Otsuki T, Koga
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K, Kojima
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1 T, Nagai P
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11-CAN-2000, 2000CP-0118774.
02-MAY-2000, 2000CP-0183765.
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Wakamatsu A,
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AAH1363 to AAH1363 to AAH1363 and AAH3689 to man amino acid sequences; and AAH3649 to AAH13632 represent binan amino acid sequences; and che exemplification are represent output and sequences and considered to the represent plane and the exemplification are represent binan amino acid sequences; and exemplification are represent planes.
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, Otsiki
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A, Nagai K,
                                                                                  ID NO:14328
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T, Wakamatsu
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27-AUG-1999, 99JP-0300255.
11-JAN-2000, 2000JP-0118778.
02-MAY-2000, 2000JP-018374.
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Ishii S,
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cDNA are useful for clarifying the function of the protein encoded by the CDNA. The full length clones were obtained by construction of full length clones were obtained by construction of full length clones were obtained by the cligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is a polypeptide encoded by a full length human cDNA of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-RCM format directly from EPC.
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Primers for synthesising the full
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99.8%; Pred. No. 3.8e-247;
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molecules have been determined.
                                                                                                                                                                                                                                                                                                                Best Local Similarity 99.8
Matches 561; Conservative
                                                                                                                                                                                                                                         562 A.R.
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The invention relates to isolated polynucleotide (I) and CO Dolypeptide (II) sequences. (I) is useful as hybridisation probes, CO Dolypeptide (II) sequences. (I) is useful as hybridisation probes, CO Dolymerse data reaction. (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The control of (II) is useful in gene therapy techniques of or identifying expressed genes. (I) is useful in gene therapy techniques of considering expressed genes. (I) is useful in gene therapy techniques of constituting a polypeptide in tissue, as molecular weight markers and as conscipring a polypeptide in tissue, as molecular weight markers and as conscipring of stressing in tissue, is biding partners are useful in medical integers involving aberrant protein expression or biological activity. (I) and its biding partners are useful for treating conscipring in produce chief providers of data and products dependent on DNA and and to produce other types of data and products dependent on DNA and and to produce other types of data and products dependent on DNA and and conscipring and in electronic format directly from MIPD and the name of the invention.

New isolated polymuclectide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess

F :

Drmanac RT, Liu C, 2001-639362/73

N-PSDB; AAS68253

HYSE ! HYSEQ INC

31-MAR-2000; 2000US-0540217 23-AUG-2000; 2000US-0649167 0-MAR-2001; 2001WO-US08631

11-0CT-2001

Claim 20; SEQ ID No 34425; 133pp; English

blodiversity

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210 SNEFEDDILNFIKTHPLMDEAVPSIFNRPWFLRTMVRYRLTKIAVDTAAGPYQNHTVVFL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53.0%; Score 2891; DB 22;
60.9%; Pred. No. 5.9e-242;
tive 28; Mismatches 92;
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chromosome mapping; gene mapping; gene therapy; forensic; upplement; medical imaging; diagnostic; genetic disorder.

supplement;

Human; food

WO203175067-A2 Homo sapiens

Novel human diagnostic protein #4057.

(first entry)

13-FEB-2002

ABG04066;

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ABG04066 standard, Protein: 863

ESULT 11 BG04066

290

523 950 683 076 743

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for identifying expressed genes. (1) is useful in gene therapy techniques to restore normal activity of (11) or to treat disease states involving (11). (11) is useful. for generating antibodies against it, detecting or grantitating a polypeptide in tissue, as molecular weight markets and as a food supplement. (11) and its binding partners are useful in medical imaging of sites expressing (11). (1) and (11) are useful in medical of insorders involving aberrat protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in disposelies, forensies, generators or their traits to assess biodiversity and to produce other types of death or other traits to assess biodiversity and to produce other types of death or other traits of assess biodiversity and to produce other types of death or other traits of assess biodiversity and to amino acid sequences of the invention.

Where The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from MIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STPYNSIPGSAVCAYDWLDIASVFTGRFYEQXSPOSTWTPVPDERVPKRPGCCAGSSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PSTPYNSIPGSAVOAYDMLDIASVPTGRFKEÇKSPDSTWTPVPDERVPKPRPGCCAGSSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          563 GYMLEVSYTLRVVIGVGLLKROTLFPRRKLRW--------PQGGRRKRSQLEAQRVI
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                                                                                                                                                                                                                                                                                                                                                             52.8%) Score 2879.5; DB 22; Length 962; 70.3%; Pred: No. 7.18-241; Live 30; Mismatches 122; Indels 101;
                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences
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                     VYCVODIBRKDVAVVORKEKEJTISRAGSMSSVTKISGLEGDTQSKDPKEFALLIPLMEN
                                                                                                                   DMPPMGSPVIPTOLPURASPSHIFSVIVVLPITQQGYQHEYVDQPHZYSSVAQMALBDQAAT
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                                                                                                                                                                                             DMPMGSPVIPTDLPLRASPSHIFSVVVLPITQQGYQHEYVQQPKXSSVAQMALEQQAAT
                                                                                                                                                                                                                                                                                                                       SSYGVDYKRSYPTNSLTRSHOATTLARNATMSSNSSHJARMOGRGGDNPPARQRVDST
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                                                                                                                                                                                                                                                                                                                                                New isolated polynuclectide and encoded polypeptides, useful in diagnostics, forensies, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      // gene mapping, gene thorapy, forensic,
imaging, diagnostic, genetic disorder.
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23-AUG-2000, 2000US-0649167,
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ABG04620 ABG04620;

SSULT 12 3G04620

863

194 154 254 214 314 274 525 434

394 484 454

334

552 514 88.0 567 634 694 676 754 736 814 915 VVVLPITQQGYQHEYVDQPKMSEVAQMALEDQAATLEYKTIKƏHLISSKSPNHGVMLVENL 874

755 LPTPESTPTLOOKRKPSRGSREWERNQNTINACTKOMPPMGSPVIPTDLPLRASPSHIPS

LPTPESTPTLQQKRKFSRGSREWERNQNLINACTKDWFFMGSPVIFTJLPRGFPPATSPA

737

CC

The invention relates to isolated polynuclectide [1] and polypeptide [1] sequences. [1] is useful as hybridisation probes, polymerase chain reaction (PCR) priners, oligomers, and for chromosome and gene mapping, and in recombinant production of [11]. The polynuclectides are also used in diagnostics as expressed requence tags

Claim 20, SEQ ID No 34979, 103pp, English

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(first entry)
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WWSCPSRSRATSMSTWTSPKXARWPRWRRTRPPHWSIRPSRWTSAARVPTMGXTLWRTW 856
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Primer sets for synthesizing polynucleotides, particularly the 5602 fullilength cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs.
                                                    DSLPPK-----VPQREASJGPPGAS-----LSQTGLSKRLEMHSSSYGVDYKRSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; primer; detection; diagnosis; antisense therapy; gene therapy
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                                                                                                     657 TACPPKFHSGRPPWVPREPPCIRPVXASGWKCTTPLPIGLTIR---
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Otsuki
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Wakamatsu A, Magai K,
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Sugiyama T, Wakamatsu
                                                                                                                                                                                                                                                                                                                                              AAB92688 standard; Protein; 507
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27-AUG-1999) 99-78-0300253.
11-JAN-2000, 2000JP-0118796.
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09-JUN-2000, 2000JP-0241899
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                                                                                                                                                                                                                                                                                                                                           949 RNOSFGROOMEPPRAPORVOSIOMERSOPSGOAVTVSROPSLNAYNSLTRSGUKRTPSLKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                426 RNGSFORGONPPPAPQRVOSIQVASSQPSGQAVTVSRQPSLNANSLTRSGLKRTPSLKP
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                                                                                                                                                                          529 RDPYCGWIKEGGACSHISPWSRLTPBQDIERGNTDGLGDCHNSFYALNGHSSSILPSTTT
                                                                                                                                                                                                                                                                                                     -----GVIRESYLKGHDQLVPV
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                                                                                                                               1 MSVYNSEKCSYDGVEDKRIMGWQLDRASSSLYVAFSTCVIKVPLGRCERHGRCKKTCIAS
                                                                                                                                                                                                           61 RDPYCGWIKEGGACSHLSPNSRLTFEQDIERGNTDGLGDCHNSFVALN ------
                                                                                                                                                                                                                                                             589 SDSTAQEGYESRGGMLEWKHILDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPV
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    Length 507
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                                            S; Indels
  DB 22;
  Score 2621.5; DB
Pred. No. 7e-219;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1009 DVPPKPSFAPISTSMKFNDACT
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Query Match
Best Local Similarity 90,2%;
Matches 507; Conservative C
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R-HSISAMPK-NLNSPNGVLJSRCPSMNRGGYMPTPTGAKVDYIQ-----GTPVSVHL 1034
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                                                                                                                                 585 LPTSTTPD----YKIFGGPTSDMEVSSSSVTTMASIPELTPKVIDTWRPKLTSSRKFV
                                                                                                                                                                             -- DSP--- DSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFVKGAVF
                                                                                                                                                                                                                                                                 SGITVYCVCD-HRRKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFG----DTQSKDPKPE
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  KEGGACSHLSPNSRLT------FEQDIERGNTDGLGDCHNSPVALNGHSSSL
                                                                                                                                                                                                                        VQDDFNTSDFTDPLSGI-----PKGVRWEVQSGESNQMYHMNVLTTCVFAAFVLGAFI
                                                                                                                                                                                                                                                                                                        AGVAVYCYRDMFVRKNRKI - - HKDAESAÇSCTDSSGSFAKINGLFDSPVKEYQQNIDSPK
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                                    SO-GSCGRVTPGMILLTEDFFAFHNHSAEGYEQDTEFGNTAHLGDCH-
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                                                                                                                                                                                                                                                                                                                               New polynucleotides and the encoded polypoptides having human secreted semaphorin-like polypeptide, useful in treating neurodegenerative diseases, viral infections or cancers, or diagnosing and mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MRSEALLIYFILL - - HFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQRHRLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58 IQMIMIMNGTLYIAARDHIYTVDIDTSHTBEIYCSKKLTWKSRQADVDTCRYKGKHKDEC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YRLTAISVDHSAGPYQNYTVIFVGSBAGAVLKVLAK--TSPFSLNDSVLLEBIENYNHAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CSYDGVEDKRIMGMQLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HNFIKVEVPRNDEXVEVGGTNAFNPMCRYYRLSTLEYDGBEISGLAROFFDARGTNVALF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.3%; Score 2361.5; DB 22; Length 1086; 45.5%; Pred. No. 1.1e-195; ative 159; Mismatches 306; Indels 147;
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                                                                                                                                                                                                 Arterburn VC,
                                                             2000US-0488725.
2000US-0552317.
2000US-0653274.
2000WO-US35158
                                           99US-0471275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 45.5
mes 512, Conservative
                                                                                                                                                                                                                                                                                                                                                                                            neuronal defects
                                                                                                                                                                                               Yeung GY,
                                                                                                                                                                                                                                                               WPI; 2001-476114/51.
N-PSDB; AAH42597.
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                                                                                                                                                      CESAH (-SSAH)
                                                               21-JAN-2000;
25-APR-2000;
31-AUG-2000;
22-DEC-2000;
                                                                                                                                                                                               Boyle BJ,
Drmanac RT;
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                                                                                                                                                                                                                                                                                                                                                                                                   genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
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2001WO-US48369

10-DEC-2001;

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The present invention relates to new NOVX polypeptides. The polypeptides, of a medicarent for treating or preventive medicarent of a factories and antibodies are useful in the manufacture of a medicarent for treating or preventive medicarents of seases, or fluington's diseases, or neuro-cgical disorders (e.g. anxiety, schizophrenia, manue depression or mental retardation, cardiovascular disease, angular performs or myocardial inflatorion), muscular diseases and disorders, retinal diseases including those involving photoreception deafness and keratinisation disorders, cancer (e.g. ovariant cancer or melanoma), immunological disorders, inflammatory and immune diseases, batterial, fungal, protozoal and viral infections, and reproductive system disorders. The proteins of the invention may be used to screen production of compounds that modulate tho NOVX protein or excessive production of NOVX protein of off off off off off off of a swell as to treat disorders characterised by instificient or excessive production of NOVX protein or protein forms that modulate and various dabotus, obscity, metabolic disturbances associated with chosess and various cancers, infectious diseases and various disconders. The present confidentificial from minute of the invention; the present of infectious diseases and various dayly infections of the invention.
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11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MRSEALLLYFTIL - - HFAGAGFFEDSEPISI - - SHGNYTKQYPVFVGHKPGRNTTQRHR
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                                                                                                                                                                                                                                                                                                                                                                               Alsobrook JP, Anderson DW, Burgess CE, Soldog FL, Casman SJ; Colman SD, Edinger SR, Ellerman K, Gerlach V, Gorran L, Grosse Guo X, Herrmann JL, Kekuda R, Leploy DM, Li L, NacDougall JR; Millet I, Pena CZA, Peyman JA, Raseelli L, Rieger DK, Shimkote Smithson G, Spytek KA, Stone DJ, Tchernev VT, Vernet CAY, Voss Zerhusen SD, Zhong H, Zhong M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New NOVX polypeptides and polynucleotides useful for trnating or
preventing e.g. neurodegenerative diseases, neurological disorders,
cardiovascular diseases, muscular diseases and disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 23;
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43.1%; Score 2349.5; EB 23
Best Local Similarity 45.4%; Pred. No. 1.2e-194;
Matches 512; Conservative 158; Mismatches 309;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 55; 299pp; English
08-DEC-2000, 2000US-254129F.
14-DEC-2000, 2000US-255648P.
15-MAY-2001, 2001US-297137F.
08-UUN-2001, 2001US-297173F.
08-UUN-2001, 2001US-39958F.
29-AUG-2001, 2001US-315639F.
01-CCT-2001, 2001US-32639F.
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N-PSDB; ABS64384.
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829 (A) 415 41.8 474 476 534 536 580 584 638 663 1,3 749 378 923 324 983 :69 984 SQR-HSISAMPK-NINSPNGVILSRQPSMNRGGYMPTPIGAKÜDYIQ-----GTPVSV ALO AHGH--GASRKETPÇFFPSSPPPHSPL--SHGHIPSAIVLPNATHDYNTSFSNSNAHKAE 866 KKLONIDHPLIKSSSKREHRRSVESRNTL--NJILKHLNDPNSNPKAIMGELQMAHQNLM 179 LFADGKLYSATVADFLASDAVIYRSMGDGSALRTIKYDSKWIKEPHFLHAIEYGNYVYFF PRETAVEHNNLGKAVYSRVARICKNDMGGSQRVLEKHWISFIKARLNCSVPGDSFFYFDV LOAVIDVIRINGRDVVLAIFSTPYNSIPGSAVCAYDWLDIASVFIGRFKECKSPDSIWIP VPDERVPKPRPGCCAGSSLERYATSNEFPDDTLNFIKTHPLWDEAVPSIFNRPWFLRTM 359 VPEDKVPKPRPGCCAKHGLAEAYKTSIDPPDETLSFIKSHPLMDSAVPPIADEPWFTKTR VRYRLTKIAVDTAAGPYQNHTVVFLGSEKGIILKFLARIGNSGF-LNDSIFLEEMSVYNS 475 EXCSYDGVEDXRIMGMQLDRASSSLYVAPSTCVIKVPLGRCERHGKCKKTCIASRDPYCG 535 WIKEGGACSHISPNSRLT------PEQDIERGNTDGLGDCHNSFVALNGHSS 537 WISQ-GSCGRVTPGMILLTEDPFAFHNHSAEGYEQDITEFGNTAHLGDCH------585 BILPISTIPD----YKIFGGPTSOMEVSSSSVTTMASIPELTPKVIDTWRPKLTSSRK ----DSP---DSTDPLGAVSSHNHQDKKGVIRESYJKGHDQJVPVILJAIAVILAFVMGA 639 FVVQDDPNTSDFTDPLSGI-----PKGVRWEVOSGESNQM7HMNVLITCVFAAFVLGA 664 VFSGITVYCVCD-HARKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFG----DTQSKDPK 692 FIAGVAVYCYREMPVRKNRKI--HKDAESAQSCTDSSGSFAKINGLFDSFVKEYQQNIDS 119 PEMILIPLMHNGKLAIPGNIAXXLIKADQHHLDJJALPIPESJIPILQQKRKPSRGSREWE 871 VENLOSL---PPKVPQREASLGPPGASLSQTGLSKRLEMHSSSY---GVDYKRSYPTNS LOPMGSMSEVPPKVPNREASLYSPPSTLPRNSPTKRVDVPTTPGVPMTSLERQRGYHKNS LIRSHQATTLKRNNINSSNSSHLSRNQSFGRGD-NPPPAPPQRVDSIQVHSSQPSGQAVIV FREIAVEYNIMGKVVFPRVAQVCKNDMGGSQRVDBKQWTSFLKGRLNCSVPGDSHFYFNI ----WED-WKHEE----PKLYSNLLTSRKELPPNGDTKSMMDHRGCPPELAALPTPESTPVLHOKTLQAMKSHSEK 984 SRQPSIMAYWSLT----RSGLKRTPSLKPDVPPKPSFAPLSTSMKP 1025 719 RNONLINACTKEMPPMGSPVIPTDLPLRASPSHIPSVVVIPTQCCYQHEY--1035 HLOPSISRQSSYTSNGTLPRIGIKRTPSLKPDVPPKPSFVPQTPSVRP 1382 ----VDQP---KMSEVAQMALEDQAATLEYKTIKEHLSSKSPN---completed: October 23, 2003, 17:10:34 SILPSTITISDSTACEGYESAGG **\$26** 086 928 596 356 416 0 Search : Job time 8 8 5 8 5 ੀ ਨੂੰ ਜੀ हें है ි සි 8 8 8 ਜੈ *ਨੇ* 90 8 8 8 Ĝ ä ò 8 8 8

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Sequence 30, Appl
Sequence 83, Appl
Sequence 4, Appl
Sequence 35, Appl
Sequence 35, Appl
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Sequence 544, App
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Sequence 544, App
Sequence 544, App
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Sequence 4, Appli
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(without alignments)
2053.395 Million cell updates/sec
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5450
1 MRSEALLAYFTLAHPAGAGE ......PPKFSFAPLSTSMKFNDACT 1630
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Lid.
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US-C9-957-187-4
US-C9-957-187-46
US-C9-957-187-30
US-C9-957-187-33
US-C9-957-187-33
US-C9-957-187-35
US-C9-957-187-35
US-C9-957-187-35
US-C9-035-977-35
US-C9-146-021-544
US-C9-146-021-544
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US-C9-146-021-544
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US-C9-146-03-54
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                    4 protein - protein search, using sw model
                                                                                                                                                                                                   October 23, 2003, 17:10:42
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Gapop 10.0 , Gapext 0.5
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Eximum DB seq length: 2000000000
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-10-140-924-54	-10-140-926-	-10-141-698-54	-10-141-702-54	-10-141-704-54	-10-142-421-54	-10-142-432-5	-10-142-767-5	-10-143-033-54	-10-144-994-54	-10-145-628-5	-10-145-631-54	-10-145-633-5	-10-145-746-5	-10-145-748-5	-10-145-823-5	-10-145-826-54	-10-145-870-54	-10-145-876-54	-10-145-959-54	-10-146-724-54	-10-146-725-5	-10-146-795-54	-10-147-495-54	-10-147-501-54	-10-147-504-54	-10-147-506-54	-10-147-509-54	-51	-10-147-511-54
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ALIGNMENTS

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Sequence 85, Application US/5955187
Fublication No. US200300545141
GENERAL INFORMATION:
APPLICANT: Shinkets, Richard A.
TITLE OF INVENTION: NOVEL POLYNUGLEOTIDES AND PROTEINS ENCODED THEREBY
FILE OF INVENTION: NOVEL POLYNUGLEOTIDES AND PROTEINS ENCODED THEREBY
FILE OF INVENTION: NOVEL POLYNUGLEOTIDES AND PROTEINS ENCODED THEREBY
FILE OF INVENTION: NOVER: 60/123,667
PRIOR APPLICATION NUMBER: 60/123,667
PRIOR APPLICATION NUMBER: 60/234,682
PRIOR FILING DATE: 2000-09-12
PRIOR FILING DATE: 2000-09-12
PRIOR FILING DATE: 2000-09-12
PRIOR FILING DATE: 2000-09-19
PRIOR FILING DATE: 2000-01-14
PRIOR FILING DANG: 8E
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Pred. No. 0;
0; Mismatches
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Best Local Similarity 98.3
Matches 1029, Conservative
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US-09-957-187-85
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TYPE: PRI
RESULT 1
US-09-957-187-85
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                                                                   PROTEINS ENCODED
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APPLICANT: Shimkets, Richard A.
APPLICANT: LaRochello, William
TILLS CENTUMENTON: NOVEL POLYNCLEOTIDES AND PROPERTIES TO SEE THE SEPRENCE: 15966-540 STO.
FILE REFERENCE: 15966-540 STO.
CURRENT APPLICATION NOVER: 15/09/957,197
CURRENT APPLICATION NOVER: 2006-59-197
RRIOR APPLICATION NOVER: 2006-59-197
PRIOR FILING DATE: 2006-39-197
PRIOR PLING DATE: 2006-39-107
PRIOR APPLICATION NUMBER: 60/23,798
PRIOR APPLICATION NUMBER: 60/23,798
PRIOR APPLICATION NUMBER: 60/23,798
PRIOR APPLICATION NUMBER: 60/23,798
PRIOR PLING DATE: 2006-99-197
PRIOR PLING DATE: 2006-91-197
PRIOR APPLICATION NUMBER: 60/174,495
PRIOR PLING DATE: 2006-91-104
NUMBER OF SEQ ID NOS: 85
SECTION OF S
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99.6%; Pred. No. 0;
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Matches 928, Conservative
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US-09-957-187-4
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TYPE: PRT
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661 MGAVESGITVYCVCDHRRKDVAVVQRKEKELIHSRRGSMSSVTKLSGLFGDTQSKDPKPE 720

GGMLDWKHILDSPOSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFV

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Sequence 4, Application US/09957187 Publication No. US20030054514A1 GENERAL INFORMATION:

601 SGMLDWKHLLDSPOSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFV

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                                  601 GGMEDWKHILIESPOSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFV
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                                                                                                         061 VPKDRPGCCAGSSSLERVATSNEFPDDTLNFIKTHPLMDEAVPSIFNRPWFIRTMVRYRL
                                                                                                                                                                                                                     TRIANDTAAGPYQNHTVVPLOSEKGIIDKFLARIGNSGFLNDSLFLEEXSVYNSEKCSYD
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                                                                                                                                                                  361 VPKPRPGCCASSSLERYATSNEFPDDTLNFIKTHPLMDEAVPSIFNRPWFLRTMVRYRL
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Publication No. US2030064514A1

GENERAL INPORMATION

GENERAL INPORMATION

APPLICANT: Shimkets, Richard A.

APPLICANT: Shimkets, William

ITLE OF INVENTION: NOVEL POINTCEDIDES AND PROTEINS ENCODED THER

FILE OF INVENTION: NOVEL POINTCEDIDES AND PROTEINS ENCODED THER

FILE OF INVENTION: NOVEL POINTCEDIDES AND PROTEINS ENCODED THER

FILE OF INVENTION: NOVEL POINTCEDIDES AND PROTEINS ENCODED THER

FILE OF INVENTION: NOVELE: 15966-59-19

PRICE APPLICATION NOVEER: 60/124,082

PRICE APPLICATION NOVEER: 60/234,082

PRICE APPLICATION NOVEER: 60/234,082

PRICE APPLICATION NOVEER: 60/234,082

PRICE FILING DATE: 2000-03-03

PRICE FILING DATE: 2000-0
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*GAVESSITVYCVCDHPRKDVAV/QREKELTHSRRGSMSSVTKLSGLFGETQSKDFKPE 720
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                                                                                                                                                                                                                                                                                                                              Sequence 6, Application US/09957187
Sequence 6, Application US/09957187
Publication No. US2003005451441
GENERAL INFORMATION:
APPLICANT: Shimters, Richard A.
APPLICANT: Shimters, Richard A.
APPLICANT: Jamochelle, William
TITLE OF INVENTION: NCYEL POLYNOLECTIDES AND FROTEINS ENCODED THEREBY
FILLE REFERENCE: 15966-94 CTP
CURRENT APPLICATION NUMBER: US/09/957,187
PRIOR APPLICATION NUMBER: 05/520,731
PRIOR APPLICATION NUMBER: 05/520,731
PRIOR APPLICATION NUMBER: 66/234,032
PRIOR FILING DATE: 2000-09-10
PRIOR FILING DATE: 2000-09-10
PRIOR FILING DATE: 2000-09-10
PRIOR FILING DATE: 2000-09-10
PRIOR APPLICATION NUMBER: 66/233,738
PRIOR FILING DATE: 2000-09-10
PRIOR APPLICATION NUMBER: 66/233,738
PRIOR FILING DATE: 2000-09-10
PRIOR APPLICATION NUMBER: 66/234,435
PRIOR APPLICATION NUMBER: 66/214,435
PRIOR APPLICATION NUMBER: 66/214,435
PRIOR APPLICATION NUMBER: 66/213,738
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Best Local Similarity 93.7%; Pred. No. 0;
Matches 873; Conservative 2; Mismatches
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S-09-957-187-6
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LENGTH: 888
TYPE: PRT
CRANISM: Homo sapiens
US-10-391-413-4
                                                                           CEGANISM: Home sapiens
SFQ ID NO 83
LENGTH: 626
TYPE: PRT
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                            Length 630,
                                                                              Indels
                          61.9%; Soore 3373; DB 11;
al Similarity 39.6%; Fred. No. 6.36-275;
628; Conservative 1; Nismatches 6;
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Sequence 80, Application US/0997187
Sequence 80, Application US/0997187
Sequence 80, Sequence 81
APPLICANT: LaRochelle, William
TITLE OF INVENTION: NOVEL POLYNUCISCITISES AND
FILE REPERENCE: 15966-540 CTP
CURRENT APPLICATION NUMBER: US/09/957,187
CURRENT APPLICATION NUMBER: US/09/957,187
PRIOR APPLICATION NUMBER: 60/122,667
PRIOR FILING DATE: 1959-03-09
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/234,032
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/234,032
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/234,032
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/234,435
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/174,435
PRIOR FILING DATE: 2000-01-04
NUMBER OF SEQ 1D NOS: 55
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JS-09-957-187-83
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                            Query Match
Best Local S.
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                                                                                                          19 GPPEDSEPISISHGNYTKQYPVPVGHKPGRNTTQRHRLDIQXIMIMNGTLYIAARDHIYT
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FUDILORATION No. USZO0316743ZAI
SENSMAL INFORMATION: OZZO0316743ZAI
SENSMAL INFORMATION: OZZO0316743ZAI
APPLICANT: XIXURA, TON: et al.
ITILE OF INVENTION: NOVEL SEMAPHORIN Z AND GENE ENCODING THE SAME
FILE REFERENCE: 020-5122P
CURRENT APPLICATION NUMBER: US/10/391,413
CURRENT FILING DATE: 2003-03-19
NUMBER OF SEQ ID NGS: 20
507TWARE: Patentin version 3.1
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tch 61.7%; Ecore 3362; DB 11; Length 626; al Similarity 100.0%; Pred. No. 5.26-274; 626; Conservative 3; Mismatches 0; Indels 0
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                                                          Pred. No. 3.4e-160,
9; Mismatches 241; Indels 141;
Length 889
     DB 12;
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     36.9%; Score 2013.5;
                                                    Best Local Similarity 45.3%; Pr
Matches 424; Conservative 129;
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AFFLICANT Describer. Luc
AFFLICANT Describer. Luc
AFFLICANT Eaton, Dan L.
AFFLICANT Goddward, Audrey
AFFLICANT Goddward, Audrey
AFFLICANT GUNNEY, Austin L.
AFFLICANT SLewart, Timothy A.
AFFLICANT SLewart, Timothy A.
AFFLICANT Washanabe, Colin K.
AFFLICANT Wood, William I.
AFFLICANT Wood, William I.
AFFLICANT WOOD, SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND MUCLEIC
TITLE CF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND MUCLEIC
TITLE CF INVENTION: ACIDS ENCODING THE SAME
FILLE REFERENCE: PRODERECT:
FILLE REFERENCE: PRODERECT:
CURRENT AFPLICATION NUMBER: US/10/035,977
CURRENT FILLING DATE: 2001-12-26
PRIOR AFFLICATION NUMBER: 60/095579
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                                           192 FTATVTDFLAIDAVIYRSLGDRPTLRTVKHDSKWFKEPYFVHAVEWGSHVYFFFREIAME 251
                                                                                                                                                                                                                                                                                                                      363 KPRPGCCAGSSSLERYATSNEFPDDILNFIKTHPLMDHAVPSIFMRPWFLRUMVRYRUDK 422
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                                                                                                                                481 GVED--KRIMGMQLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWIKE
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                                                                                             YNIMGKVVEERVAQVOKNOMGGSQRVLEKQWISFLKARINGSVEGDSHFYENILQAVIDV
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36.9%; Score 2009.5; DB 11, Longth 886;
Best Local Similarity 45.2%; Pred. No. 7.4e-160;
Matches 423; Conservative 130; Vismatches 241; Indels 141; Gaps
PRIOR FILING DATE: 1999-68-25
PRIOR APPLICATION NUMBER: 09/64443
PRIOR PLING DATE: 2000-08-27
PRIOR PLING DATE: 2000-08-27
PRIOR PRILOR DATE: 2000-12-20
PRIOR PLING DATE: 2000-12-20
PRIOR PLING DATE: 2000-12-20
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OR FILING DATE: 2001-06-05
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OR FILING DATE: 2001-06-29
OR PILING DATE: 2001-07-18
PRIOR FILING DATE: 1998-55-15
PRIOR APPLICATION NUMBER: 66/11303
PRIOR FILING DATE: 1998-12-12
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ATICN NUMBER: PCT/US99/10733 DATE: 1999-05-14 ATICN NUMBER: PCT/US99/2851 DATE: 1999-12-22 DATE: 1999-12-22 ATICN NUMBER: PCT/US99/30720 DATE: 2099-09-01 ATICN NUMBER: PCT/US00/05601 DATE: 2000-09-01 ATICN NUMBER: PCT/US00/19641 DATE: 2000-06-22 ATICN NUMBER: PCT/US00/19642 DATE: 2000-06-24 ATICN NUMBER: PCT/US00/19642 DATE: 2000-06-24 ATICN NUMBER: PCT/US00/19642 ATICN NUMBER: PCT/US00/19664 ATICN NUMBER: PCT/US00/19666 DATE: 2000-06-24 ATICN NUMBER: PCT/US00/19666 ATICN NUMBER: PCT/US00/12066 ATICN NUMBER: PCT/US00/120736 ATICN NUMBER: PCT/	S ALGERT LEGARGE PERSONER LA SENGNIA DE POPENCIANTIQUE PREDE ANTELES SENGRANTIQUES SENGRANTIANT SENGRANTIQUES SENGRANTICUES SENG	Cy 63 IMMSTLYTAARDHIYTVDIDTSHTBEIYGSKKUTWKSRQADVDTCRMKGKHKDECHNFIK 1	CY 123 VLLKKUDDALFVCGTNARNESCRNYKMDTLEPFGBEFGBRARCPYDAKHANVALFADGKL 1	2y 183 YSATVIDELAIDAVIYREJGESPTLRTVKHDSKWLKEPYFVQAVDYGDXIYFFFREIAVE 2 :: : : : : : : : : : : : :	KARLNOSVPGDSHFYFNILQAV 'i:	2) 303 IRINGROWLATESTPYNSIPGSAVCAYDMLDIASVFIGREKEGKSPSSTWTPVPDERVP 3 12 VSLGGRPWLAVFSTPSNSIPGSAVCAFDLTQVAAVFEGRFREGKSPESIWTFVPEDQVP 3	CY 363 KPREGCCAGSSSLERYATSNEFPDDTLNFIKTHPLMDEAVPSIFNRPWFLRTWVRYRLTK 4 1	Cy 423 IAVUTAAGPYONHTVPLOSEKGIILKFLARIGNSSFLNDSUFLEEMSVYNSEKCSYD 4
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539 GGACSHISPNSRITFEQDIERGNTDGLGDCHNSFVALNGHSSSLLPSTITSDSTAQEGYE 598
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                                                       63 IMNGTLYIAARDHIYTVDIDISHTBEIYCSKKLTWKSROADVOTCRWKGKHKUHCHWFIK
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130 VAVDVGAGPWGNQTVVFLGSBAGTVLKFLVRPNASTSGTSGLSVFLBBFBTYRFDBAGGRP 489
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TITLE OF INVENTION: SECRETED AND TRANSMEYBRAKE POLYRENTIDES AND KUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILER REFERENT PARAMETER 1010/137,870
CURRENT APPLICATION NUMBER: 2002-05-03
                                                                                                                                   GOACSHLSPNSRLTFFQDIERGNIDGLGBCHNSFVALNGHSBBLLPBTTTSDSTAQEGYB
                                                                                                                                                                                                                       SRGGMLDWKHLLDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILA
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Best Local Similarity 45.2%; Pred. No. 7.4e-150;
Matches 423; Conservative 130; Mismatches 241; Indels 141; Gaps
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Publication No. US2C3.0136883A1
GENERAL INFORMATION:
APPLICANT: Baker.Kevin F.
APPLICANT: Bereshil, Marken.
APPLICANT: Deforge, Laura
APPLICANT: Deforge, Laura
APPLICANT: Deforge, Laura
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Tumas, Daniel
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Gurney, Austin L.
Sherwood, Steven
Smith, Victoria
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Filvaroff, Ellen
Gao, Wei - Qiang
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ORGANISM: Homo Sapien
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TILE OF INVENTION: SCRETED AND TRANSKEMBRANE POLYPEPTIDES AND NUCLEIC
TILE OF INVENTION: SCRETED AND TRANSKEMBRANE POLYPEPTIDES AND NUCLEIC
TILE OF INVENTION: ADDIS SMCODING THE SAME
FILE REPERINCE: P3330R1067
CURRENT APPLICATION NUMBER: US/10/140,021
CURRENT FILING DATE: 2022-05-06
PRIOR APPLICATION FEROVED - See Falm or File Wrapper
SCO ID NO 544
                                                                                                                                                                                                                   637 FVVGAVVSGFSVGWFVGLRERRELA--RRKOKEAILAHGAGEAVLSVSRL----GERRAQ
                                                                                                                                                                                                                                                                                                                     716 DP------KPEATLIPLMHNGKLATPGNTAK-MIJKADQHHLDLTALPTPEST
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Bast Local Similarity 45.2%; Pred. No. 7.4e-160;
Matches 423; Conservative 130; Mismatches 241; Indels 141;
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Publication No. US20030138886A1
GENERAL INFORMATION:
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AFPLICANT: Beresini, Maureen
APPLICANT: DeForger, Jaura
APPLICANT: Desnoyers, Duc
APPLICANT: Filwaroff, Blien
APPLICANT: Filwaroff, Blien
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Stewart, Timothy A
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Wood, William
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Gurney, Austin L
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ORGANISM: Homo Sapien
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APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SCREETED AND TRANSMERRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCOING THE SAME
FILE REFERENCE: P3330RIC1S8
CURRENT APPLICATION NUMBER: US/10/140,018
CURRENT FILING DATE: 2002-65-06
PLIOR APPLICATION THE SOURCES OF PAIM OF FILE WRAPPOF NUMBER OF SEQ ID NOS: 550
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Best Local Similarity 45.2%; Pred. Mo. 7.46-160;
Matches 423; Conservative 130; Mismatches 241;
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Wood, William
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Goddard, Audrey
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Gurney, Austin D.
Sherwood, Steven
                                  Desnoyers, Luc
Filvaroff, Ellen
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S-10-140-018-544
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LENGTH: 886
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AND TRANSMEMBRANE POLYPEPTIDES AND NUCLBIC

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APPLICANT: Tumas, Daniel
APPLICANT: Watanabe, Colin K
APPLICANT: Wood, William
APPLICANT: Shang, Zemin
ITTLE DO INVENTION: SECRETED AND TRANSMEMBANE FOR ITTLE DO INVENTION: SECRETED AND TRANSMEMBANE FOR ITTLE DO INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330RICIEL 2002-05-26
PRIOR APPLICANTON NUMBER: US/10/140,274
CHRRENT FILING DATE: 2002-05-26
PRIOR APPLICANTON EMBOR: SOC FILE Wrapper OF WIMDER OF SEQ ID NOS: SSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ) TYPE: PRT
: ORGANISM: Homo Sapien
US-10-140-274-544
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                                                                                                                                                                                                                                                                               243 YNTMGKVVERNAQVCKNDRGGSQRYLGKQWTSBLKAKLMIGVPODSHBYENLLGAVTDV 363 († 17.1.) | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. | 1.1. |
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VILLERDESTILEVOGSNAFNPVCAVYSIDTIQPYGGNISGNARCPYDPKHANYALFSDGML 191
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                                                                                                    YSATVIDEDALIYRSIGESPILRTVKHDSKWLKEPYFVOAVDYGDYIYFFFREIAVE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243 YNTMGKYVFPRVAQVCKNDMGGSQRVJEKQWTSFLKARLNCSVPGDSHFYFNILGAVTDV 302
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                                                                                              5 ALLLYFTILHFAGAGFPEDSEFISISHGNYTKQYPVFVGHKPGRNTTOR--HRIDIGMIM 62
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                                                                                                                                   72 RVARTIFIGDRDALYRVELEPPTSTELRYQRKLIWRSAPSDINVCRMKGKQEGECRNPVK
                                                                                                                                                                                                                                                                                      .23 VLLKKNDDALFVCGTNAFNPSCRNYKYDTLEPFGDEFSGNARCPYDAKHANVALFADGKL
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    DB 12; Length 998
Cucry Match
Best Local Similarity 45.2%; Pred. No. 7.4e-160;
Matches 423; Conservative 130; Mismatches 241; Indols
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Sequence 544, Application US/10140274
Publication No US2003014567441
GENERAL INFORMATION:
APPLICANT: Baker, Keyin P.
APPLICANT: Beresini, Maureen
APPLICANT: Deforge, Laura
APPLICANT: Deforge, Laura
APPLICANT: Personyers, Luc
APPLICANT: Filvaroff, Ellen
APPLICANT: Goodwei-Qiang
APPLICANT: Goodwei, Faul
APPLICANT: Goodweki, Faul
APPLICANT: Goodweki, Faul
APPLICANT: Grewei, Mary
APPLICANT: Sherwood, Steven
APPLICANT: Sherwood, Steven
APPLICANT: Sherwood, Steven
APPLICANT: Steven

8-10-140-274-544

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312 VSLGGRPVVLAVPSTPSNSIPGSAVCAFDLIQVAAVFEGRFREQKSPESIWTPVPEDQVP 371
                                                                          363 KPRPGCCAGSSSLERYATSNEFPDDTLNFIKTHPLMDEAVPSIFNRPWFLRTMVRYRLTK 422
                                                                                                                                                                         423 IAVDTAAGPYQNHTVVFLGSSEKGIILKFLAR--IGNSGFLNDSLFLEEMSVYNSEKCSYD 460
                                                                                                                                                                                                                                                                                                                                                                  GGACSHISPNSRITFEQDIERGNTEGLGJCHNSFVALNGHSSSILJFSTTTSDSTAQEGYE 598
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                                                                                                                                                                                                              430 VAVDVQAQPWGNQTVVFLGSBAGTVLKFLVRPNASTSGTSGLSVFLEEFETYRPDRGGRP
                                                                                                                                                                                                                                                                   GVED--KRIMGMOLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTC1ASRDPYCGMIKE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         561 GPGGPGGGGGGAGVPPEALLAPIXQNG-----wAKATILQGGPHDLDSGULFTPBQT
                                                                                                                     RPREGCCAAPGM--QYNASSALPDEILNFVKTHPLMDEAVPSLGHAPWILRTLMRHQLTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                           599 SRGGMLDWKHLLDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLATAV1LA
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Publication No. US20030134354A1
GENERAL INFORMATION:
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Gerritsen, Mary E.
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart, Timothy A.
Tumas, Daniel
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DeForge, Laura
Desncyers, Luc
Filvaroff, Ellen
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Gurney, Austin 2.
Sherwood, Steven
Smith, Victoria
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APPLICANT:
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APPLICANT:
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                                                                                                   871
                                                                                                                                              APEQPPAPGEFTPDGRLYAARPGRASHGDFPLTPHASPDRRRVV-----SAFTGPLDPA 811
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            252 FNYLEKVVVSRVARVCKNDVGGSPRVLEKQWISFLKARLNGSVPGDSHFYRNVLQAVIGV 3::
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  PILQQKRKP-----SRGSREWERNQNLINACTKDMPPMG3PVIPTULP---LAASPSH 811
                                                    -----GHPILIPASASSSILLIAPPR 757
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ziang, Zemin
TITLE OF INVENTION: SECRETED AND TEANSMEMBRANE POLYFERTICES AND NUCLEUC
TITLE OF INVENTION: ACTES ENCOLING THE SAME
FILE SEPERENCE: P1310RIGI63
CURRENT APPLICATION NUCLER: US/10/140,471
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                                                                                                 IPSVVVLPITQQGYQHEYVDQPKMSEVAQMALEDQAATLBYKTIKSHLSSKSPNHGVNLV
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45.2%; Pred. No. 7.4e-160;
attive 130; Mismatches 241; D
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                                                                                                                                                                                             BNLDSLP-PKVPCREASL-----GPPGASLSQT 898
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36.9%; Score 2009.5;
Best Local Similarity 45.2%; Pred. No. 7.4e-
Matches 423; Conservative 130; Mismatches
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                                                 714 P-LPCKRIPTFHPHPHALGPRAWDH-----
                                                                                                                                                                                                                                                                                                                                                             Sequence 544, Application US/10140471
Publication No. US20030138887A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 2002-05-56 Prior Apploication removed - See NUMBER OF SEC ID NOS: 550 SEC ID NO 544 LENGTH: 888
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Wood, William
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APPLICANT: Beresini, Maureen
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Godowski, Paul J.
Gurney, Austin D.
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Filvaroff, Ellen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deforge, Laura
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ORGANISM: Homo Sapien
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US-10-140-922-544
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Matches 423;
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                                                                                                                                                                                   Query Match 36.9%; Score 2009.5; DB 12; Length 898; Best Local Similarity 45.2%; Pred. No. 7.46-160; Matches 423; Conservative 130; Mismatches 241; Indels 141;
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APPLICANT GUERRY ALGERTH 1.

APPLICANT STELL, VACTORIA APPLICANT STELL, VACTORIA APPLICANT STELL, VACTORIA APPLICANT STELL, VACTORIA APPLICANT STEWART TILDER AND TRANSMEMBRANE POLYFEPTIDES AND NUCLEIC APPLICANT WAGAINED COLIN K APPLICANT WOOG, WILLIAM APPLICANT STEWART PROPERTY OF SECRET APPLICANT THE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYFEPTIDES AND NUCLEIC TILLS OF INVENTION: ACIDS ENCOSING THE SAME FILE STEERING PRICATION: ACIDS ENCOSING THE SAME FILE STEERING DATE: 2021-05-07 CURRENT APPLICATION NUMBERS 19/10/140,922 CURRENT APPLICANT CONTROL SECRET S 122 .33. VILKKNDDALFVCSTNAFNPSCRNYKMDTLEPFGDEFSGMARCPYDAKHANVALFADGKL 182 242 362 XPRFGCCAGSSSLERYATSNEFPDDTLNFIKTHPLMCEAVPSIFNRPWFLRTMVRYRLTK 422 RPREGCCAAPGM -- CYNASSALPEDILNFVKTHPLMDEAVPSLGHAPWILRTLMRHQLTR 429 423 IAVUTAAGPYONHTVVFLGSEKGIILKFLAR--IGNSGFLNDSLFLEEMSVYNSEKCSYD 480 191 251 312 VSLGGREVVLAVFSTPSNSIPGSAVCAFDLTQVAAVFEGREREÇKSPESIMTEVPEDQVP 371 5 ALLYFILLHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQR--HRLDIQMIM ALLILLILLIGGAHGLFPEEPPPLSVAPROYLNHYPVFVGSGPGRLTPAEGADDUNIQRVL 63 IMNGTIYIAARDHIYIVDIDISHIEEIYCSKKLIWKSRQADVDTCRMKGKKKDECHNFIK 72 HVNRTLFIGDADNIYAVELEPPISTELRYORKITWRSNPSDINVCRMKGKÇEGECRNFVK VII LROBSTLFVCGSNAFNPVCANYSIDTLQPVGDNISGMARCPYDPKHANVALFSDGMU 183 YSATVIDELAIDAVIYRSLGSSPILRTVKHDSKWIKEPYFVQAVDYGDYIYFFREIAVE FIRTUTELAIDAVIYRSLGDRFTLRIVKHDSKWFKEPYFVHAVBWGSHVYFFFREIAMB IRINGREVVLATESTPYNSIPGSAVCAYDMLDIASVETGREKEÇKSPESTWTPVFDERVP DB 12; Length 688 Indels 241; 36.9%; Score 2009.5; DB 1; 45.2%; Pred. No. 7.4e-160; 130; Mismatches Sequence 544, Application US/10140922 Publication Mo. US20030138889A1 GENERAL INFORMATION: Desnoyers, Luc Filvaroff, Ellen Gao, Wei - Gang Gerritsen, Mary Goddard, Audrey Godowski, Paul J. Gurney, Austein J. Sherwood, Stevon Beresini,Maureen DeForge,Laura Conservative LENGTE: 888 TYPE: PRT ORGANISM: Homo Sapien Similarity

490 GGGETGQRILSLSLDAASGGLIAAFPRCVVPVPVARCQQYSGCMKNCIGSQDPYCGMAPD 543

539 GGACSHLSPNSRLTFEGGIERGNYDGLGDCHNSFVALNGHSSSLARSTITSDSTAGEGYR 599

550 -GSCIFLSPGIRARESDLVSGAFTSGLGDC------

481 GVED--KRIMGMOLDRASSSLYVAFSTCVIKYPLGRCERHGRCKKTCIASRDPYCGMIKE 538

599 SRGGMIDWKHULDSPDSTDPLGAVSSHNRQDKKGVIRESYDKGHDQUVPYTLLALAVILA 659

579

661 GPGGRGGGGGGGAGVPPEALLAPLAQAG------WAKATLLGGGPHDIDSGLLFTPBGT 713

716

714 P-LPGKRUPTPHPHPHPHALGPRAMEH-------GHPLNPASASSSLLNLAPAP 757

762 PILCOKKKP-----BRGSREWERNQNIINACTKEMPPKSSPVIPTDLP---LBASSSH 611

758 APEOPPAPGEPTPDGKLIKAARPGRASHGDFPLTPHASFCRRVV-----SAFTGPLDPA R11

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812 IPSVVVUDPITQQGYQHEYVDQPKXSEVAQMALEDQAATLEYKTIKSHLSSKSPNHGVNU7 871

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(c) 1393 - 2003 Compugen Ltd
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US-09-254-594-6
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Best Local Similarity 45.3%; Pred. No. 1.7e-182;
Matches 424; Conservative 129; Mismatches 241; Indels
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US-06-121-13D-62
US-09-060-692-62
US-08-833-31-62
PCT-US94-10151A-62
                                                                                                                     ALIGNMENTS
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TITLE OF INTENTION: NOVEL SEYAPHOPIN Z AND
FILE REFERENCE: 0020-4426A
CURRENT APPLICATION NUMBER: US/03/077,940A
CURRENT FILING DATE: 1998-06-05
NUMBER OF SEQ ID NOS: 20
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                                                                        AMERNYLEKVANSRVARVCKANDVGGSPRVLEKQMTSFLKARLNCSVFGDSHFYFNVLQAV
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US-09-254-594-6
Sequence (Application US/09254594)
Patent No. 5566094
OENDERAL INFORMATION:
APPLICANT: KIMURA, Toru
APPLICANT: KIMURA, Toru
TITLE OF INVENTION: NOVEL SEMAPHORIN GENE: SEMAPHORIN Y
FILE REFERENCE: 0020-4527P
CURRENT APPLICANTS: 1999-05-11
NUMBER OF SEC ID NOS: 13
SOSTWARE: PATENTIN VERSION 3.0
SOSTWARE: PATENTIN VERSION 3.0
SOSTWARE: PATENTIN VERSION 3.0
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  IAVDIAAGPYQNHIVVFJGSBKGILLKFLAR - - IGNSGFINDSUFLEBKSVYNSEKCSYD
                                                                          GVED--KRIMGMQLDRASSSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYGGWIKE
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Sequence 2, Application US/09077940A

GENERAL INFORMATION

APPLICANT: KIMTSA, Torn et al.

TILLE OF INVENTION: NOVES, SEMAPHORIN Z AND GENE ENCOSING THE SAME

FILE REPERENCE: 020-4426A

CURRENT FILING DATE: 1998-06-25

SOFTMARE: Patentin Version 3.1

SEQ ID NO 2
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Best Local Similarity 42.7%; Fred. No. 6.3e-181;
Matches 433; Consorvative 132; Mismatches 260;
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TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70 RILLVAARDHVFSFDLQAQEEGEGLVPNKFLTWRSQ--DMENCAVRGKLTDECYNYIRVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24? TPGLGRVÇESRVARVCKROMGGSPRALDRHWISFLKLRINCSVPGDSTFYFDVLQSLTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            303 IRINGRDVVLATESTPYNSIPGSAVCAYDMLDIASVETGREKEOKSPDSTWTPVPDERVP
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                                                                            936 RNNTNSSKSSHL---SRNQSFGRGDNPPPAPQRVDSIQVHSSQPSGQAVTVSRQPS---
                                                                                                                        ---PSGGPSRYSGGPGKHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 LILLLISIPÇAQTAFPQDPIPLINSDLÇGTSPSSWPRGLEDDAVAAEL-GLDFQRFLTLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66 GTLYIAARDHIYTVDIDTSHT-ŞEIYCSKKLTWKSRQADVDTÇRMKGKHKJECHNFIKVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125 LKKNDDALFVCGTNAFNPSCRNYKNDTLEPFGDEFSGMARCPYDAKHANVALFADGKLYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 VPWDSQTLJACGTNSFSPVCRSYGITSLQQEGEELSGQARCPFDATQSTVAISAEGSLYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         363 KPRPGCCAGSSLERYATSNEPPDDTLNFIKTHPLMDEAVPSIFNRPWFLRTMVRYRLTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        367 SPRPGSCAGVGAAALFSSSQDLPDDVLLFIKAHPLLDPAVPPATHOP-11TLTSRALLTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   426 VAVDGMAGPHRNTTVLF1GSNDGTVLKV1PP-GGQSLGPEPIILEEIDAYSHARCS--GK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 JILYFTLIHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQRHRLDIQMIMIMN
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US-09-254-594-3
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                                                                                                                                                                  989 -- LNAYNSITRSGLKRTPSLKPDVPPKPSF-APLSTSMKPN
                                                                                                                                                                                                                 884 LYLGRPEGYRGRALKRVDVEKPÇLSLKPPLVGPSSRÇAVPN
                                                                                                                      834 -RPALSAPAPRLGVGGGRIPFSGHRAPPALLTRV---
                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: KIMURA, Toru
APPLICANT: KIMURA, Toru
APPLICANT: KIMURA, Kaoru
ITLE OF INVENTION: NOVEL, SEMAPHORIN GENE: SE:
FILE EPERBRUCE: 0022-4557P
CURENT APPLICATION NUMBER: US/09/254,594
(URENT APPLICATION DATE: 1999-05-11
NUMBER OF SEQ ID NOS: 12
SCFTWARE: Patentin vergion 3.0
SEC ID NOS:
                        194 ALPPE--PAPALLGGPSPREHECASPLRLDV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COCATION: (1, ...7) OTHER INFORMATION: Tissue Type: Brain
                                                                                                                                                                                                                                                                                                         US-09-254-594-3
; Sequence 3, Application US/09254594
; Patent No. 6566094
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                                                                                                                                                                                                                                                                                                                                                                              GTLYIAARDHIYTVDIDTSHT-ABIYCSKKLTWKSRQADVDTORMKGKHKDEGHNFIKVD 124
                                                                                                                                                                                                                                                                                                                                                                                                                           RILLVAARDHVESFDIQABBEGBGLVPNKYLTWRSQ DVBNGAVRGKLTDBCYHYIRVL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKKNDDALFVGGTNAFNPSCRNZKMDTLEPFGDEFSGMARCPYCAKHANVALFADGKLYS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VPWDSQTILLACGTNSFSPVCRSYGITSLQQFSEELSGGARGPFDATQSRVAIFAEGSLYS 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AIVIDELAIDAVIYRSLGBSPICRIVKHDSKWIKEPYFVCAVDYGDYIYFERBIAVEYN 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TMGKVVFPRVAQVOKNEMGGSQRVLEXQWTSFLKARLNCSVIGSSHFYFNJLQAVTDVIR 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RLGKVQESRVARVCKRCMGGSPRALDRHWISFLKLRLMCSVPGDSTFYFDVLQALTGPVN 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INGROVIVATESTEYNSIEGSAVCAYOMIDELASVETGREKEÇKŞEDSTWIEVPDERVEKE 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THORSALFGVPTTQTNSIPGSAVGNPYLDETERGFEGKPKEGR&LDGAMTPVSSERVPST 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPGCCAGSSSLERYATSNEFPDDTLNFIXTHFLMDEAVPSIFNRPWFLATMVRYRLTKIA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VOTAAGPYONHTWVFLGSEKGILLKFLARIGNSGFLNDSLFLEEMSVYNSEKCSYDGVED 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TARRIIGLELDTEGHRLFVAFSGCIVYLPLSRCARHGACQRSCLASQDPYCGWHSSRG-C 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SHLSPNSRLIFEQDIERGNTDSL--GDCHNSFVALNGHSSSLLPSTTISDSTAQEGYESR 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDIROSGGTDVDQ---AGNQESMEHGDCQDG-------586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGMLDWKHLLDSPDSTDPLGAVSSHNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFV 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----GVRRDLPPASASRSVPIDLLASVAKAFA 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----AHRRRGKOLETPGLPRPLSLRSLARLHG- 659
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660 -GGPEPPPSKDGDAVQTPQLYTTFLPPPEGVPPP-----ELACLPTPESTPELPV 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRKPSRGSREWERNQNLINACTKDMPPMGSPVIFIDLFLRASPSH-----IPSVVVLFFIT 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----KEGPGRSRGGHAAGGPAPRVLVRF-- 752
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                                                                                                                                                                                                                                                                                                                               13 LÍLLESTER-TOAAFRODELTISDIGGÍSPISMFRGERDRAVAEL-GIDFÓRFLTUK 90
                                                                                                                                                                                                                                                                                   6 ILLAYFTLLHFAGAGFPEDSEPLSISHGNYTKQYPVFVGHKFGRNTTQRHRLDIOMIXIMN
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                                                                    NAME/KEY: misc_feature
LOCATION: (1...7)
OTHER INFORMATION: Identification Method: P for resulting peptide
-09-254-594-6
                                                                                                                                                                                                                                         188
                                                                                                                                                                                           4; Length 930;
                                                                                                                                                                                      Query Match
27.9%; Score 1519.5; DB 4; Length
Best Local Similarity 35.9%; Pred. No. 2.4e-135;
Xatches 381; Conservative 135; Mismatches 386; Indels
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                        LOCATION: () ()
OTHER INFORMATION: Tissue Type: Child Brain
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55 EKDHNSLLVGARNIVVNISLRDLTEFTEQ-----RIEWHSSGAHRELCYLKGKSEDDCQN 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280 BIQSTSDILEGNYGGQVEKLIYGVETTPVNSIGGSAVCAFSMKSILESFDGPFKEQETWN 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 FIKVLLKKNDDALFVGGTWAFNPSCRNYKMDTLEPFGD-----EFSGMARCPYDAKHANV 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FFREIAVEYNTMGKVVFPRVAQVCKNDMGGSQRVLEKQWTSFLKARLNCSVPGDSHFYFN 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295 ILQAVIDVIRIN-GRDV---VLATFSTPYNSIPGSAVCAYDMLDIASVFTGRFKEQKSPD 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   351 STWIPVPDERVPKPRPGCCAGSSCHRYATSNEFPDDILNFIKTHPLMDEAVPSIFNRPW 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSLFLEEMSVYNSEKOSYDGVEDKRIMGMQ1DRASSSLYVAFSTCVIKVPLGRC - ERHG 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     446 DSVVIBBIQVIP-----PGVPVKNIYVVRMDGDDSKUVVSDDBILAIKLHRGGSDKIT 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   576 NGHSSSLLPSTTTSDSTA-----QEGYESRGGMLDWKHLLDSPDSTDPLGAVSSHNHQ 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----ASPVPTQPTTKSSGDPVN:SIHQAEPEPE---IDNEIVIGVDDSNVIPNTLAEINHA 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 ALFADGKLYSATVIDFLAIDAVIYRSLGESPTLRIVKHDSKWLKEPYFVQAVDYGDYIYF
                                                                                                                                                                                                                                                                                                                                                                                                                                    8 LYFTLLHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQR------HRLDIQMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 DIWVALH--AAAWVNDVSP-----KMYVQF----GEERVQRFIGNESHKDHFKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166 AIYSEGÇLYSATVADFSGTDPLIYRG-----PÜRTERSDIKÇLNAPNFVNTMEYNDFIPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   340 SNRJAVPSJKVPEPRPGGCVND----SRTLPDVSVNFVKSHTLMDEAVFAFFTRFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   411 FLATWVRYRLIKIAVD----TAAGPYQNHTVVFLGSEKGILLXFLARIGNSGFLN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  392 LIRISLOYRFTKIAVDQOVRTPDG--KAYDVLFIGTDDGKVIKAL----NSASFDSSDTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520 KCKKTCIASRDPYCGWIKEGGACSHL-ŞPN---SRLTFEÇDIERGNIDGLGDCHNSFVAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  500 NORE-CVSLQDPYCAMDNVELXCTAVGSPEWSAGKRRFIONISLGEHKACGGRPQTEIV-
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                     117;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             611 GSK-------DSSQEKLPIYJABTJAIATSCLGALVVGFISGFLFS 652
                                                                                                                                                                                                                                                                                                                                      Length
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                                                                                                                                                                                                                                                                                                                                 Quory Match 17.8%; Score 969.5; DB 1; Best Local Similarity 34.4%; Pred. No. 4.5e-83; Natches 244; Conservative 124; Mismatches 224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 58. Application US/OSE35268
Patent No. 2807826
GENERAL INFORMATION:
APPLICANT: Kolodkin, Alex L.
REFERENCE/DOCKST NUMBER: B94-
TELEDOWINICATION INFORMATION:
TELEPHONS: (415) 343-4341
TELEPK: (415) 343-4342
TELEX: (415) 343-4342
INFORMATION SEQ ID NO: 58:
SEQUENCE CHARACTERISTICS:
LENGTH: 730 amino acids
                                                                                                                                                                                amino acids
                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                US-08-121-713D-58
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US-08-835-268-58
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                                                           483 RSPRABRIIGLELDTECHRLEVAFFCCIVYLSLERCARHSACQRSCLASLOPYCGMHRF 542
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             775 HGPQPPRKGSEPLASAPFTSRPPASEPGAALFVD------SSPKPR----- 814
                                                                                                                                                                                                                       596 GYESROGMIDWKHILDSPDSTIPLGAVSSHNHQDKKGVIRESYLKGHDQIVPVTILALAV 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GG-PWEWNONGNNASEGPGRPRGCSAAGGPAPRVLVRPPPPGCPGGEVEVITILEELLRYL 774
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              872 ENLDSLPP-----KVFQREASLGPPGASLSQTGLSKRLEMHHSSSYGVDYKRSY 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              921 PTNSLTRSHQATTLKRNNTNSSNSSHLSRNQSFGRGONPPPARQRVDS--IQVHSSQFSG 978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             716 DPKP----EALLTPLMANGKLATPGNTAKMLIKADQHHLDLTALPTPRSTPTLQQKKKPSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                665 PPPPKDGDAAQTPQLYTFLPFPGGSPP-----FLACLPTPELPVKHLRAS
                            ED-- - KRIMGMQLDRASSSLYVAPSTOVIKVPLGRCERHGKCKKTOIASRDPYGGWIKE
                                                                                                                                                                                                                                                                           -----GVREDLSPASASRSIPIELLLACV
                                                                                                                                                                                                                                                                                                                            656 ILAFVMGAVESGITVYCVODHFRKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFGDTQSK
                                                                                                                            539 GGACSHISPNSRITFEQDIE-RGNTDGL--GDGRNSFVALNGRSSSILPSTTTSDSTAGE
                                                                                                                                                                        543 RGCVNIRGPGG-----TOVDITGNOESKENGDOQUG------ATGGQSGPGDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---DCVPPLRLDVPPDGKRAAPSGRPALSAPAPRLGVSG-SRRL---
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             884 HILYLGR-PDGHRGRSIKRVDVKSPLSPKPPLATPPOFA 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Goodwan, Coley S.
APPLICANT: Matches, David APPLICANT: Matches, David APPLICANT: Matches, David APPLICANT: Denties, David APPLICANT: Denties, David APPLICANT: O'CONDO, The Semaphorin Gene Family NUMBER CF SEQUENCES: 100 CCARESPONDENCE ADDRESSE: SCIENCE & TECHNOLOGY LAW GPOUP STREET: 268 Bush Street, Suite 3200 CTTV: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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13-SEP-1993
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Patent NC. 5638856
GENERAL INFORMATION:
APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex 1.
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FILING DATE: 13-SEP-1993
CLASSIFICATION: 5:4
ATTONNEY/AGENT INPORMATION:
NAME: OSMAN, RICHARD A.
REGISTRATION NUMBER: 36,627
                                                                                                                                                                                                                                                                           585 AY-----
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462 DSLFIEEMSVYNSEKCSYDGVEDKRIMGMQLDRASSSLYVAFSTCVIKVPLGRC--ERHG 519
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                                                                                                                                                                                                  520 KCKKTCIASRDPYCGWIKEGGACSHL-SPN---SRLTFEQDIERGNIDGLGDCHNSFVAL 575
                                                                                                                                                                                                                                                   500 NCRE-CVSLODPÝCAMDNVELKCTAVGSPDWSAGKRRFIQNISLGEHKACGGRPQTELV-
                                                                                                                                                                                                                                                                                                               576 NGHSSSLLPSTTTSDSTA-----QEGYESRGGMLDWKHILLDSPDSTDPLGAVSSHNHQ
                                                                                                                                                                                                                                                                                                                                                                  558 ---- ASPVPTOPTTKSSGDPVHSIHQAEFEPE---IDNEIVIGVDDSNVIPNTLAEINHA
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                                                                                                                                                                                                                                                                                                                                                                                                                        629 DKKGVIRESYIKGHDQLVPV----TL-1AI-----AVILAFVMGAVFS 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         611 GSK-----LPSSQEKLPIYTAETİTIAIVTSCLGALVVGFISGFLFS 652
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Matthes, David
APPLICANT: Bentley, David
APPLICANT: O'Connor, Timothy
IITLE OF INVENTION: The Semaphorin Gene Pamily
WUMBER OF SEQUENCES: 100
COFFESSEDE: SCIENCE & TECHNOLOGY LAW GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17.8%; Score 969.5; DB 2 34.4%; Pred. No. 4.5e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3: SCIENCE & TECHNOLOGY LAW GROUP
268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
ZIP: 94104
CCMPUTER READABLE FORM:
MDJUM TYPE: Floppy disk
CCMPUTER: IBM PC compatible
CPERATING SYSTEM: PC-DOS/WS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-060-692-58
Aequence 58, Application US/09060692
Peatont No. 5935865
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 34.48
Matches 244; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
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STATE: CA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55 EKDHNSILVGARNIVYNISIRDLTEFTEG-----RIEWHSSGAMRELCYLKGKSEDDCGW 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120 FIKULLKKNDDALFVCGTNAFNPSCRNYKMDTLEPFGD-----EFSGMARCPYDAKHANV 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALFADGKLYSATVTDFLAIDAVIYRSIGESPTLRTVXHDSKWLKEPYFVQAVDYGDYIYF 234
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STWTPVPDERVPXPREGCCAGSSSLERYATSNEPDDTLNFIKTHPLMDEAVPSIFNRPW 410
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411 FLRIMVRYRLIKIAVD----TAAGPYQNHTVVFLGSEKGIIJKFLARIGNSGFLN---- 461
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 17.8%; Score 969.5; JB 1; Length 730;
Best Local Similarity 34.4%; Pred. No. 4.5e-83;
Matches 244; Conservative 124; Mismatches 224; Indels 117; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       SCFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/835,268
                 APPLICANT: Sentiey, David R.
APPLICANT: O'Comor, Timothy
TITLE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                             ADDRESSEE: SCIENCE & TECHNOLOGY LAW SRCUP
STREET: 268 Bush Street, Suize 3200
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DA.E.
CLASSIFICATION:
PROG APPLICATION DATA:
PAPLICATION NURSE: US/08/121,713
FILING DATE: 2-SEP-1943
ATTORNEY/AGENT INFORMATION:
NAME: OSMAIN, RICHARD A.
PARTICAL NURSEE: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DCCKST NUMBER: 894-502-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)343-4341
TELEFAX: (415)343-4342
                                                                                                                                                                                                                                                                                                      ZIP: 94104
COMPUTER REARABLE FORM:
SMDIUM TYPE: Floppy disk
CMMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Matthes,
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                                                                                                                                                                                                                            CITY: Sar
STATE: CA
COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FIKVLLKKNDDALFVOGTNAFNPSCRNYKMOTLEPFGD----BFSGMARCPYDAKHANV
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Matches 244; Conservative 124; Mismatches 224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17.8%; Score 969.5; DB 3; 34.4%; Pred. No. 4.5e-83;
                     CLASSIFICATION: 830
PRIOR APELICATION DATA:
APPLICATION NUMBER: US 08/121,713
FILING DATE: 13.58P-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                             36,627
                                                                                                                                                NAME: Osman, Richard A. REGISTRATION NUMBER: 36,62. REFERENCE COCKET NUMBER: REFERENCE NUMBER: RESCONMUNICATION INFORMATION TELEPHONE: (415)343-4341
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SEQUENCE CHARACTERISTICS:
LENGTH: 730 amino acid
TYPE: amino acid
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TELEX:
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TYPE: ami
TCPOLCGY:
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                                                 MINNGTLYIAARDHIYTVDID--TSHTEEIYCSKKLTWKSRQADVOTORMKGKEKDECHN 119
                                                                                              EKDHNSLLVGARKIVYNISJRELTERTER-----RIEWHSSGARRELCYJKGKSEDDCON 103
                                                                                                                                                   120 FIKVLLKKKIDDALFVOGTNAFNPSCRNYKMOTLEPFOD-----BFSGMARGPYDAKHANT 134
                                                                                                                                                                                235 FFREIAVEYNTMGKVVFPRVAÇVCKNDMGGGGRVLBKQWTSFLKARLNGSVFGDSHFYFR 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            340 SNWLAVPSLKVPEPRPGCCVNC-----SRTLPDVSVNFVKSHTLMDEAVPAFFTRPI 391
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                                                                                                                                                                                                                                                                                                                                                                                  221 FFRETAVEYINGKAIYSRVAKVCKHDKGOPHQGGUR-WISFLKSRLNGSVEGDYFFYFN
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                                                                                                                                                                                                                                                                                                   166 AIYSEGOLYSATVADESGTDELIYEG-----PLRTERSDLXQLNAPNEVNUMEYNDEIFF
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11 LINVALH--AAAMINDVSP-----KMYVQF----GBERYQRFLGNESHKOHFKLL
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Patent No. 613781
SENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Kolockin, Alex I.
APPLICANT: Bentles, David
APPLICANT: Bentles, David
APPLICANT: Bentles, David
APPLICANT: O'Concor, Timothy
ITLE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 Bush Street, Suite 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DGS/MS-DGS
SÖFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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ZIP: 94104
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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CITY: San Francisco
STATE: CA
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                                                                              351 STWIFVPDERVPKPRFGCCAGSSSLERYAISNEFPDDTLNFIKTHPLMDEAVPSIFNRPW
                                                                                                                                                                                                               VICESLOYMETHINDSCOTTED ----NSASFDSSDTV
                                                                                                                                                                                                                                                                                                                                                                                                     8 LYFTLLHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQR-----HRLDIQMI
                                                                                                          -----SRTLPDVSVNFVKSHTLMCEAVPAFFTRPI
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                                                                                                                                                                                                                                                                         462 DSLFLEEMSVYNSEKCSYDGVEDKRIMGMQLDRASSSLYVAFSTCVIKVPLGRC--ERHG
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OBNURAL INFORMATION:
APPLICANT: The Regents of the University of California
TILE OF INFORMATION: The Semaphorin Gene Family
NUMBER OF SECUENCES: 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTRY: USA
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUT TYPE: Floppy disk
COMPUTER: ISW PC COMPATIBLE
COMPUTER: ISW PC COMPATIBLE
CORRESTING SYSTEM: FC.DG/MS.DGS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/10151A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSE: FLERR HOMBACH IEST ALBRITTON & HERBERT
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
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ilarity 34.4%; Pred; No. 4.5e-83;
Conservative 124; Mismatches 224;
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                                                                                                                      340 SNWLAVPSLKVPEPRPGCCVND--
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NAME: Osman, Richard A.
REGISTRATION NUMBER: 36,0
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amino acid
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PCT-US94-10151A-58
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Rest Local Similarity
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT-US94-10151A-58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    175 ALFADGKLYSATVTDFLAIDAVIYRSIGBSPTLRTVKHDSKWIKEPYFVQAVDYGDYIYF 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166 AIYSEGÇLYSATVADFSGTDPLIYRG-----PLATERSÖLKÖLNAPNEVNTMEYNDF1FF 220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221 FFRETAVEYINGGKALYSRVARÖCKHÖKGSPHÇGGDR-WISFLKSRINGSVFGÖYPFYFN 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120 FIKVLLKKNDDALFVCGTNAFNPSCRNYKMDTLEPFGD-----BFSGMARCPYDAKHANV 174
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 LYFILLHFAGAGFPEDSEPISISHGNYTKQYPVFVGHKPGRNTTQR------HRLDIGMI 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 LLWVALH--AAAWVNDVSP------KMYVQF-----GEERVQRFLGNESHKDHFKL, 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 MIMNGTLYIAARDHIYTVDID--TSHTBEIYOSKKLTWKSROADVDTGRMKGKHKDECHN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: STEM: PC-DOS/MS-DCS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/060,610
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17.8%; Score 969.5; DB 4;
Best Local Similarity 34.4%; Pred. No. 4.5e-83;
Matches 244; Conservative 124; Mismatches 224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION SATA:
APPLICATION NUMBER: 08/835,268
FILLING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                         Sequence 58, Application US/09065510
Patent No. 6344544
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RELECOMMUNICATION INFORMATION:
TELEPHONE: (415)343-4341
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amino acid
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REGISTRATION NUMBER: 36
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SEQUENCE CHARACTERISTICS:
LENGTH: 730 amino acid
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MOLECULE TYPE: protein
US-09-060-610-58
                                                                                                                              GENERAL INFORMATION:
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                              RESULT 9
US-09-060-610-58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232 QTGINSNWLPVNNAKVPDPRPGSC-----HNDSRALPDPTLNFIXTHSLMDENVPAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FNRPWFLRTHVRYRLTKIAVD----TAAGPYQNHTVVFLGSEKGIILKFL-ARIGNSGFL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               514 RC-+SRHGKCKKTCIASRDPYCGWIKEGGAC-SHLSPN--SRLTFEQDIERGNTDGLGDC
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                                                                                                                                                                                                                                                                                                                                                                                                                      Cucry Match
Best Local Similarity 35.8%; Prod. No. 1.38-74;
Matches 207; Conservative 95; Mismatches 194
                                                                                                                     394-002-1
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Patent No. 5927826
GENERAL INFORMATION:
FILING DATE: 13-58P-1993
CLASSIFICATION: 514
ATTGANEY/AGENT INFORMATION:
NAME: OSMAT, RICHARD A.,
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: 394-01
TELECHONE: (415)343-4341
TELECHONE: (415)343-4342
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Kolodkin, Alex L.
Matthes, David
Bentley, David R.
O'Connor, Timothy
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TOPEL amino acid
COPICOS: 11-2-2
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IMPORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                              SALECULE TYPE: protein US-18-121-7135-60
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APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      520 KCKKTCIASRDPYCGWIKEGGACSHL-SPN---SRLTFBQDIERGNTDGLGDCHNSFVAL 575
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                                                MIMNGILYIAARDHIYTUDID--TSHTRRIYOSKKLIMKSRQADVDIQRAKGKHKDBCHN 119
                                                                                      EKOHNSILVGAANIVYNISLACITEFTEQ-----RIEWHSSGAHRELCYIKGKSEDOCON 109
                                                                                                                                         FIKYLLKKNDDALFVOGTNAFNPSCRNYKKDTUSFFGD-----FFSGMARCPYDAKHANV 174
                                                                                                                                                                   110 YIRVLAKIDDDRVLICGINAYKPLCRHYALKO----GDYVVYKKFYBGRGLOPPDDHKST 165
                                                                                                                                                                                                                                    ALEADGKLYSATVIDFLAIDAVIYRSLGESPTLRTVKHDSKWLKEPYFVÇAVDYGDYIYE 234
                                                                                                                                                                                                                                                                                                                        FEREINVEYNTWORWVEPRVAQVORNDMOGSORVLEKOMISFIRMALMOSVPODSHFYFN 294
                                                                                                                                                                                                                                                                                                                                                                      221 PFRETAVEYINGGKAIYSRVARVČKHDKGGPHQGGUR-WISFLKSRINGSVPGDYPFYFN 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                             280 ELOSTSELIEGNYGGOVEKLIYGVPTTPVNSIGGSAVCAFSYKSILESFDGPFKEGETME 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STWTPVPDERVPKPRPGCCAGSSSLERYATSNEFPDCTLARFLANDRAVPSLFNRPW 410
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLRTMVRYRLTKIAVD----TAAGPYQNHTVVFLGSEKGIILKFLARIGKSGFLN-----461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DSVVIEELQVIP-----PGVPVKNIYVVRNDGDDSKLVVVSDDEILAIKLHACGSDKIT 499
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                                                                                                                                                                                                                                                                             AIYSEGQLYSATVADFSGTDPLIYRG----PLRTESSILKÇINAPNEVNINEYNDELFF
    11 LIMVALH--AAAAWVNOWSP-----KMYVQF----GBERVQRFLGNESHKDHFKLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        629 DKKGVIRESYLKGHDQLVPV----TL-LAI-----AVILAFVMGAVFS 666
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US-09-12:-113D-60
Sequence 60, Application US/08121713C
Patent No. 568956
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Kolodkin, Alex L.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Matthes, David M.
APPLICANT: Bentloy, David M.
APPLICANT: Applicant: Timestry
APPLICANT: Applicant: Timestry
ITLE 0F INVENTION: Timestry
ITLE 0F INVENTION: Timestry
ITLES OF INVENTION: The Semaphorin Gene Family
NOMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE M. TECHNOLOGY LAW GROUP
STREET: 268 Bush Street, Suite 3200
GITY: San Francisco
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floopy disk
COMPUTER: IBM PC COMPUTER:
OPERATING SYSTEM: PC-DOS/MS-DOS
CONFUARE: PATEMIT Release #1.0, Version:
APPLICATION NUMBER: US/08/121,7130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
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290 HEYENILQAVTOVIR----INGROVVLATFSTPYNSIPGSAVCAYDMLDIASVFTGRFKE 345
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58 RHNSTSVLADNELYSGTVADFSGSJPIIYRE----PLQTECYDSLSLNAPNFVSSFTCS 112
569 HNSFVALNGHSSSLIPSTTTSDSTAQEGYESRGGMLDWKHILLDSPDSTDPLGAVSSHNHQ 628
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114 KDECHNFIKVILKKNJDALFVCGTNAFNPSCRNYKMD----TLEPFGDEFSGMARCPYDA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95; Mismatches 194; Indels
                                               450 -----HAACPSGKINSKDANAGEQKGFRNDM----DLLDS
                                                                                           629 DKKGVIRESYLKGHDQLVPVTLLAIAVILAFVKGAVFS 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OCMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMCPUTER: IBM PC COMPATIBLE
OFERATING SYSTEM: PC.DCS.MS-DCS
SCFTWARE: PATCHIN RELease #1.0, Version #1.25
GUSTENT APPLICATION DATA:
APPLICATION NUMBER: US/C9/060,692
                                                                                                                                        484 SKEÇELIENIDKNFEDLINAÇYTVETLVMAVLAGSIFS
                                                                                                                                                                                                                                                                                                                              APPLICANT: Goodman, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Matthes, David R.
APPLICANT: Bettley, David R.
APPLICANT: C'Connor, Timothy
ITILE OF INVENTION: The Semaphorin Gene Family
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
16.1%; Score 880; DB 2;
Best Local Similarity 35.8%; Pred. No. 1.3e-74;
Matches 207; Conservative 95; Mismatches 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADGRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 Bush Street, Suite 3200
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/121,713
FILING DATE: 13.6EP-1993
ATTORNEY/AGBNT INFORMATION:
                                                                                                                                                                                                                                                          Sequence 60. Application US/09060692
Patent No. 5935865
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Coman, Richard A. BEGISTRATION NUMBER: 36,627 REERENCE/DOCKET NUMBER: B9-TELECOMMUNICATION: (418)343-4341
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ) MOLECULE TYPE: protein US-09-060-692-60
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CLASSIFICATION: 514
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US-09-060-692-60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S8 RENSTSVLADNELYSGTVADPSGSDPIIYRS-----PİQTEQYDSLSLNAPNFVSSFTQG 112
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          461 NDSLFLEEMSVYNSEKCSYDGVEDKRIM-GMQLDRASSSLY...--VAFSTCVIKVPLG 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        514 RC--ERHGKCKKTCIĄSRDPYCGWIKEGGAC-SHLSPN--SRLTFEQDISRGNTDGLGDC 548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      290 HFYFNILGAVIDVIR----INGROVVLATFSTPYNSIPGSAVCAYOMIDIASVFTGRFKE 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              172 PFYFNEIQSASNIVEGQYGSMSSKLIYGVFNIPSNSIPGSAVCAFALQDIADIFEGQFKE 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OKSPDSTWTPVPDERVPRERPGCCAGSSSLERYATSNEFPDDTLNPIKTHPLMDBAVPSI 405
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         342 VTSVVIEEIDVUTKS----EPIRNLEİVRTMQYDQPKDGSYDDGKLIVTDSQVVALQLH 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BDDCQNYTRIMVPSPGRLFVGGTNSFRPMCNTYIISDSNYTLEA---TKNGQAVGPYEP 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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35.8%; Pred. No. 1.3e-74;
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                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRATT APPLICATION EAA.
APPLICATION UNASE: US/C8/835,268
The Semaphorin Gene Family
                   NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSES: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 248 Bush Street, Suite 5200
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION:
APPLICATION NUMBER: US/08/121,713
FILING DATE: 13-520-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 89
TELECOMMINICATION INFORMATION:
TELEPHONE: (415)343-4341
TELEFAX: (415)343-4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36,627
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 35.87
Matches 207; Conservative
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TITLE OF INVENTION:
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                                                                                                                                                                                       94:04
                                                                                                                                                                                                                                                                                                                                                                                  PILING DATE
                                                                                                                                        STATE: C.
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58 RANSTSVIADNELYSGTVADFSGSDPIIYRE----PICTSQYDSLSLNAPNFVSSFTCG 112
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        232 QTGINSNWLPVANAKVEDPREGSC-----HNESRALPBETLNFIKTHSLMDENVPAF
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                                                                                                                                                                                                                               170 KHANVALFADGKLYSATVIDFLALDAVIYRSLGESPITRIVKHOSKWLKEPYFVQAVDYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OKSPOSTWTPVTDERVPKPRPGCCAGSSSLERYATSNEPPDDTLNFIKTHPLMDBAVPSI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       461 NDSLFLEEMSVYNSEKCSYDGVEDKRIM-GMQLDRASSSLY....-VAFSTCVIKVPLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514 RC--ERHGKCKKTCIASRDPYCGWIKEGGAC-SHLSPN--SRLTFEQD1ERGNTDGLGDC
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                                                                                                                                       114 KDECHNFIKVILKKADDALFVOGTNAFNPSCRNYKMD----TLEPPGDEFSGNARCPYDA
                                                                                                                                                                                1 BDDCQNYIKIMVVPSPGHLFVGGTWSFRPMCNTYIISDSNYTLBA -- TKNGQAVCPYDP
                                                                                                                                                                                                                                                                                                                                                 342 VISVVIEEIDVLIKS----EPIRNLEIVRIMQYBQPKDGSYDDGKLIIVTDSQVVAIQLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     569 HNSFVALNGHSSSLLPSTTTSDSTAQEGYESRGGMLDWKHLLDSPDSTDPLGAVSSHNAQ
                                                                                                                                                                                                                                                                                                                       230 DYLYFFFRETAVEYNTMGKVVFPRVAQVCKNDMGGSQRVD.BKQWTSFDKARLNCSVPGDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        172 PFYFNEIQSASNIVEGQYGSMSSKLIYGVFNTPSNSIPGSAVCAFALQDIADTFEGGFKE
                                                                                            Gabs
                                                                                            62;
                                               Length 650
                                                                                            Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC:DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/060,610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SKOQEIIDMIDKNFEDIINAQYTVETEVMAVLAGSIFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Goodran, Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Watthes, David R.
APPLICANT: Bentley, David R.
APPLICANT: O'Connor, Timochy
TILLE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SECUENCES: 100
CORRESFONDENCE ADDRESS:
                                               16.1%; Score 880; DB 3;
35.8%; Pred. No. 1.3e-74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSEE: SCIENCE & TECHNOLOGY LAW GROUP
1: 258 Bush Street, Suite 3200
San Francisco
                                                                                            95; Mismatches
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/ Sequence 60, Application US/09060610
/ Patont No. 6344544
                                        16.17
Pest Local Similarity 35.8°
Matches 207: Conservative
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  08-08-833-391-60
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       172 PPYPNETQSASNLVBGQYGSMSSKLIYGVPNTPSNSIPGSAVGAFANGQJADTFEGQFKE 331
                                                                    346 QKSPDSTWTPVPDBRVTKPRPPCCCAGSSSLERYATSNBRRDDTLMRIKTHPLMDEAVPST 405
                                                                                                             232 QTGINSNWLPVNNAKVPDPRPGSC -----HMESRALPDPTINFIKTHSDMDENVPAF 283
                                                                                                                                                               FNRPWFLRTMVRYRLTKIAVD----TAAGPYQNHTVVFLGSBKGIILKFL-ARIGNSGFL 460
                                                                                                                                                                                                     PSOPILVATSTITAPTOTAVACATKTPOS - - XTYDVIPVGTOHGKIIKSVAKESADSADK 341
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                                                                                                                                                                                                                                                                                             342 VISVVIĒŠIDVLIKS----BPPRNESĪVRIMĢYDQPKDGSYDDGKLIVTUSQVVAIQLE 397
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COMPUTER: 13M PC compatible
CPERATING SYSTEM: PC-DCS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/633,191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Goodman. Corey S.
APPLICANT: Kolodkin, Alex L.
APPLICANT: Watthes, David A.
APPLICANT: Bentley, David R.
APPLICANT: Bentley, David R.
APPLICANT: The Semaphorin Gene Family
TILLE OF INVENTION: The Semaphorin Gene Family
NUMBER OF SEGUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: SCIENCE & TECHNOLOGY LAW STREET: 268 Bush Street, Suite 3200 CITY: San Francisco STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
CLASSIFICATION: 530
FAIOR APPLICATION DATA:
APPLICATION NUMBER: US 05/121,713
FILING DATE: 13-SEP-1993
ATGRAEY/AGENT INFORMATION:
NAME: OBERN, SICHARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Osman, Richard A.
REGISTRATION NUMBER: 36,627
REPERENCE/DOCKET NUMBER: 894-002-1
TELECHONE: (415)343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 60, Application US/03833391
Patent No. 6013781
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INFORMATION FOR SEQ ID NO: 60:
SEQUENCE CHARACTER.STICS:
LENGTH: 650 amino acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: linear
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy:
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J8-833-391-60
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Thu Oct 23 17:22:36 2003

FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/835,268
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: OSTERN, RICHARD 8,627
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: 894-002-1
TELEPHONE: (415)343-4341
TELEPHONE: (415)343-4341
TELEFAX: (415) 343-4342

INFORMATION FOR SEC ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 650 amino acids
TYPE: amino acid

TOPOLCGY: linear MOLECULE TYPE: protein US-09-060-610-60

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484 SKDÇELIDNIDKNFEDLINAQYTVETJVYAVLAĞSIFS 521
                                                                                                                  Search completed: October 23, 2003, 17:10:59
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Job time : 23 secs

170 KHANVALFADGKLYSATVTDFLAIDAVIYRSLGESPTLRTVKHDSKMIKEPYFVGAVDYG 229 RHNSTSVLADRELYSGTVADFSGEDFILYRE-----PLQTEGYDGLSLNAPNFVSSFTQ3 112 HEYPRILGAVIDVIR----INGROVULATESTRYNSIEGSAVGAYDMUDIASVETGREKS 345 172 PFYFNEIQSASNLVEGGYGSMSGKLIYGVFNTPSNSIPGSAVGAFALQGIAGTFEGGVKK 231 FNRPWELRTMVRYRLTKIAVD----TRAGFYQNHTVVPLGSEKGILLKFL-ARIGKSGFL 460 DYIYEFFREIAVEYNIMGKVVFPRVAQVOKKIDKGRQRVLEKQMISFLKARINGSVFGDS 280 QKSPDSTWTPVPDERVPKPRPRGCCAGSSGLBRYATSNEFPDDTLNFTKTHPTMDEAVPST 405 232 CTGINSNWI.PVMMAKVPDPRPGSC-----HNDSRALPDFTLNPIKTHSLMDENVFAF 283 NDSLFLEEMSVYNSEKCSYDGVEDKRIK-GMQLDRASSSLY-----VAFSTCVIKVPLG 513 342 VTSVVIEEIDVITKS----EPIRNLEIVRIMOYDCPKDGSYDDGKLIIVTDSQVVAICLH 397 514 RC--ERHGKCKKTCIASRDFYCGWIKEGGAC-SHLSPN--SRLTFEQDIERGNTDGLGDC 569 569 HNSFVALNGHSSSILPSTTTSDSTAQEGYESRGGMLDWKHLJDSPDSTDPLGAVSSHNHQ 628 ---RRC 483 114 KDECHNFIKVLIKKNDDALFVGGTNAENBSCRNYXMD----TLEPFGDBFSGYARGEYDA 1 EDDCQNYIRIMVVPSPGRLFVCGTKSFRPMCNTYIISBSNYTLEA -- - TXXGQAYCPYDP DEVYFERRETAVEFINGSKAIVGKVARVGKURGGRIR-FENRWISFLKGRLNGSIRGDY SGED 92, Query Match 16.1%; Score 860; 23.4; Jonyth 650; Best Local Similarity 35.6%; Pred. No. 1.36.74; Matches 207; Conservative 95; Mismatches 134; Indels 450 -----HAACPSGKINSKÖNNAGEGKGPRNOM---DILES--629 DKKGVĮRESYLKGHDQLVPVTLLAIAVILAFVMGAVFS 666 905 58 230 113 290 346 795 .Q Ω 25 S 6 9 ò S Ġ ô ò 8 S 3 ò 6 6 ò

Human semaphorin p Human secreted pro Human cDNA clone C Human semaphorin 6 Novel human cDNA s

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AAA93618 AAA93617 AAV44295 AAF98469

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Ruman semaphorin-1 Human semaphorin 6 Human semaphorin-1 Nucleotide sequenc CADHP-2 coding seq Human mddt cDNA SE Human reproductive Human reproductive Human reproductive Human cDNA clone (

A3S64382 ABS64380 ABS64384

AAH18729 AAH15994

33333 34498 3355 46060 6060 331983 32095 32095

AAH16063

AAL04256 AAL04255

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ABX34714

AALC0809 AAC90703 ABT19408

AAH10827

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DNA encoding bindi
Human colon cancer
Human cDNA sequenc
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GenCore version 5.1.6
Copyright (c) 2993 - 2003 Compuden Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                           2552756 segs, 1349719017 residues
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Maximum Match 190%
Listing first 45 summaries
                                                                                             - nucleic search, using sw model
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AAH13995
AAK94365
ABK34739
AAH15834
AAH17861
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                                                                                                                                                                                                                                 Title:
Perfect score:
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Human secretory pr Fluorescent calacd Aspergillus fumiga Aspergillus fumiga Aspergillus fumiga Aspergillus fumiga Aspergillus fumiga Aspergillus fumiga Aspergillus fumiga

ABT21228 ABT18814 ABT20630

AAV58278

ABT18220 AHT20034

AA:80415

Mycobacterium tube Mycchacterium tube

AA180413 AA199683 AA199682

ABX72218 AB271148 ABS57346

Human NOVX polynuc S. murayamasmo... cDNA encoding huma

ALIGNMENTS

RESULT 1

Tylactone synthase

Human: semaphorim 6A-1; (HSA)SEMA6A-1; neuronal development; apoptosis; neuronal regeneration: Ena/VASP protein family; immunomodulatory; ene therapy; diagnostic agent; therapeutic agent; differentiation; cytoskeletal stabilisation; plasticity; ds. /*tag= a /product- "Binding domain of semaphorin 6A-1" /product- "binding domain shows homology to 2yxin protein and selectively binds to members of Ena/VASP protein family, especially Evi; the CDS does not include stop codon" DNA encoding binding domain of human semaphorin 6A-1. Location/Qualifiers AAD01234 standard: DNA: 216 (first entry) WO200031252-Al 04-0CT-2000 Homo sapiens 02-JUN-2000 AAD01234; AAD01234

Wed Oct

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Human; primer; detection; diagnosis; antisense therapy; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  invention.
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                                                                                                                                                                                                                                      The present sequence is a DNA encoding binding domain of transmembranous human semaphorin 6A-1 (HSA)SENA6A-1) which is involved in neuronal development and regeneration mechanisms during apoptosis. The binding domain shows homelogy to Zyzin protein and selectively binds to members of Ena/VASP protein Family, aspecially By1. (HSA)SENA6A-1 is a member of protein Family displaying secreted or transmembrane based repulsive quidance cues critically involved in neuronal development. Expression of (HSA)SENA6A-1 is highest in neuronal development. Ridney and moderate in lung. Its propession of control of the involved in a secreted and therapeutic agents, for modulating the immune system, in gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGCGTGACTGTCTCGAGGCAGCCCAGCCTCAACGCCTACAACTCACTGACAAGTCG 120
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                                                                                                                                             Nucleic acid coding for himan schaphorin 6A: used as diagnostic agent, therapeutic agent, for modulating immune system. In dence therapy of for effecting differentiation, cytoskeletal stabilization and/or plasticity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 COGCCGCCGCCCCGCCACAGGGTGCACTCCACCACCACCACCACCCATCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; colon cuncer; colon cancer antigen; diagnosis; detection; identification; gytostation; cardioactive, neuroprofective, vulnerary; impunomodulatory; miscriar; gypaecological; gasizointestina; nephrotropic; antilnfective; antibacterial; gene therapy; wench neural disorder; immune system disorder; miscriar disorder; miscriar disorder; miscriar disorder; miscriar disorder; interpoductive disorder; gasirointestinal disorder; renal disorder; infectious disease; cardiovascular disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S; Gaps
                                                                                                                                                                                                                                                                                                                                                                      therapy, for effecting differentiation, cytoskoletal stabilisation and plasticity.
                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21: Length 216:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human colos cancer antigen suclostide sequence SEC 1D Notes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 216; DB 21;
Pred. No. 2e-52;
); Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCCACATCCATGAAGCCCAATGATGCTGTATA 218
                                                                                                                                                                                                                                                                                                                                                                                                                 45 A; 85 C; 51 G; 35 T; 0 other;
                                                     (PLAC ) MAX PLANCK GES FOERDERUNG WISSENSCHAPTEN
                                                                                                                                                                                                                 Claim 2; Page 21; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC98050 standard; cDNA; 1472
                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
100.0%;
95WO-EP09215
                            98EP-0122441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 100.0
Matches 216: Conservative
                                                                                Klostermann A:
                                                                                                       WPI; 2000-400065/34.
P-PSDB; AAY71461.
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 216 BP;
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 26-NOV-1999;
                          26-NOV-1998;
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                                                                              Behl C,
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AAC97991 to AAC98763 encode the human colon cancer associated proteins, called human colon cancer antigers, given in AAB5334 to AAB58006. The human colon cancer antigers an have cytostatic, cardioactive, muscular, neuroprotective, immunoricalises can have cytostatic, cardioactive, muscular, neuroprotective, immunoricalise, and can be used in gene the thorapy. The colon cancer antigen polynuclectides, can be used in gene the taypy. The colon cancer antigen polynuclectides, can proteins and antibodies to the proteins are useful for the prevention, treatment and diagnosis of colon disorders, such as colon cancer. The polynuclectides may be used in diagnostics and research, such as for chronosome identification, and as hybridisation probes. The proteins may also be used to prevent diseases such as neural disorders, immune system disorders, muscular disorders, reproductive disorders, immune castrointestinal alsorders, wounds, renal disorders, infectious and cardiovascular disorders. AAC88764 to AAC89772 and AAB54007 represent sequences used in the exemplification of the present.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 GGGCTGAAGGGTAGGCCCTCGCTAAAGCCGGACGTACGCGCGAAACCATCCTIIGCTCCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             551
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colon cancer associated gene sequences, referred to as colon cancer antiques, useful for the treatment, prevention, and diagnosis of colon disorders such as colon cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1472;
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Pred. No. 3.2e-52;
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Best Local Similarity 186.0%; Pred. No. 3.2
Matches 216; Conservative 6; Mismatches
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                                                                                                                                  2000WC-US05883,
                                                                                                                                                                                            990S-0124276.
                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
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                                                                                                                                                                                                                                                                                                                              Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                           WPI: 2000-587534/55
                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAB53293
WC200055351-A1
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us-09-856-681-3.rng

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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The prosent invention describes primer sets for synthesising 5662 full-length cDNAs defined in the specification, Where a primer set comparises: (a) an oligi-dT primer and a cliented control entering to the complementary strand of a polynucleotide which comprises one of the 5602 nucleotide exprises at least 15 nucleotides; of (b) a compination of an oligonucleotide comprises a sequence complementary to the compination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'end sequence and an oligonucleotide comprises a sequence complementary to the optymocleotide which comprises a 1'end sequence complementary to the polynucleotide which comprises a 1'end sequence of a polynucleotide which comprises a 1'end sequence of polynucleotide which comprises a 1'end sequence of the complementary to the sequence 1'end sequence is selected from those defined in gene thorapy. The primers are useful for synthesis and polynucleotides, particularly full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also was and a MAHIBGS and AMHIBGS and AMHIBGS to PAMHIBGS and AMHIBGS and AMHIBGS and Sequences, and AMHIBGS to PAMHIBGS and Sequences, and Sequences, and AMHIBGS to PAMHIBGS and Sequence and Sequences, and AMHIBGS to PAMHIBGS and Sequence and Sequences, and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and Sequences and
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                                                                                                                                                                                                                                                                                                                                                                  Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the extention and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CCGCCGCCCCCCCCCGCAGGGTGGACTCCATCCAGGTGCACAGCTCCCAGGCATCTGGC
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Crsuki
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                                                                                                                                                                                                                                                                                    Hayashi K, S
A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                   sogai T, Nishikawa T,
Sugiyama T, Wakamatsu
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                                                                                                                                                29-JUL-1999; 99-P-0248035.
27-AUG-1999; 99-D-0300253.
31-AAN-2000. 26040F-0118775.
32-AAY-2000: 20007P-0183787.
09-JUN-2000: 20007P-0241899.
                                                                                                                  28-JUL-2000; 2000EP-0116126
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Matches 216; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                       full-length cDNAs
                                                                                                                                                                                                                                                                                    Isogai T,
                 Homo sapiens
                                               EP1074617-A2
                                                                                  07-FEB-2061
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to primers for synthesising full length cDNA clouds. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length method: The primers capable the production of the full length without any special methods. The present sequence is a full length without any special methods. The present sequence is a full length
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T, Koga
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S, Otsuki T,
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                                                                                                                                                                                                                                   Human: full length cDNA; CDNA synthesis; oligo-capping;
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100.0%; Pred. No. 3.6e-52;
Ulve 0; Mismatches 0;
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Sugiyama T. Nagai K. Kojima
                                                                                                                                                                          Suman full-length cDNA, SEC ID NO: 3087
E.
AAK94365 standard; cDNA: 2227
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                                                                                                              06-NOV-2001 (first ontry)
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                                                                                                                                                                                                                                                                                                  Homo sapiens
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The invention relates to 625 polynucleotides which have been derived from a variety of human tissue sources and which encode novel scereted proteins, their complaments and sequences than hybridise to them.

Also included are a vector complishing the polynucleotide, a lost cell transformed with the vector, the proteins encoded by the conditions that bind to the proteins and identification of modulators of the proteins that bind to the proteins and identification of modulators of the proteins or the expression of the polynucleotides.

The polynucleotides can be used as probes for the identification and solution of full length cobes for the identification of modulators of also useful in the treatment of various immore deficiencies and disorders or such as viral infections, bacterial infections, fungal infections.

Such as viral infections, bacterial infections, fungal infections and autoimmune disorders (e.g. Alziemer's disease, parkinson's disease), liver librosis, coaguiation disorders (e.g. Alziemer's disease, parkinson's disease), liver librosis, coaguiation disorders (e.g. Hummopoliila), inflammatory disorders (e.g. Crohn's disease) and tuniours. They are also useful for the treatment of human inches and unlower. They are also useful for human inches and unlower. They are also useful for human inches and unlower.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Six hundred and twenty five polynucleotides derived from a variety of human tissue sources which encode secreted proteins, useful for treating immune deficiencies and disorders such as autoimmune disorders
                                                                                                                                                                                                            Human; ss; gene; secreted protein; immune deliciency; viral infortion; bacterial infection; fungal infection; autoimmune disorder; burn: rheumatoid arthfitis; suitiple secterosis; autoimmune thyroiditis; allabotes; allergy; astima; neurodegementive disorac; through dispass; parkinson's disease; liver fibrosis; tracur; coaquilation disorder; haemophilia; infiammatory disorder; alcer; tissue regeneration; wound healing; haematopolesis; myeloid deficiency; lymphoid cell deficiency.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of burns, inclisions and ulcors. The proteins are also useful for regulating hadmatopolosis, for treating mys-cold or lymphoid cell deficiencies. The present sequence is one of the 625 obea sequences encoding a secreted profess.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fechtol K, Agostino MJ, Howes SH,
                                                                                                                                                                                Human cDNA for novel secrete) protein, SEQ 10 508.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 272; 339pp; English.
                                             ABK34739 standard; cDNA; 2262 BP
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Gulukota K, Graham JR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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                                                                                          ABK34739;
RESULT 5
                       ABK34739
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Resnick RT:

Length 2262;

Score 216, 35 24: Pred. No. 3.6e-52:

100.0%;

Query Match Best Local Similarity

Sequence 2262 BP; 604 A; 695 C; 522 G: 441 T: 3 other;

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of an oligonuclectide comprising a sequence complementary to the complementary strand of a perynacicolide which comprises a 5' end sequence and an oligonuclectide comprising a sequence complementary to a polynuclectide which comprises a 3' end sequence, where the chipanuclectide comprises at least 15 nuclectides and the combination of the Specification. The primers sets can be used in antisense therapy and in dene therapy. The primers are useful for synthesising polynuclectides,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human, primer, detection, diagnosis, antisense therapy, gene therapy, ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes primer sets for synthesising 5602 full-length cDNAs defined in the specification. Where a primer set complises: (a) an oligonord primer and an oligonordeotide complementary to the complementary strand of a polynoclocide which comprises one of the 5602 nucleotide sequences defined in the specification, where the cligonordeotide comprises at least 15 nucleotides; or (b) a combination
                                                                                                                  61 CAGGCCGTGACTGTCTCGAGGCAGCCTCAACGCCTACAACTCACTGACAAGGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primer sets for synthesizing polynucleotides, particularly the 5602 full-length conAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                               1 COSCOGCOUSCOCCOCAGAGGAGGACTCCATCCAGGTGCACGCCCCCAGCCATCTGGC
0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yamamoto J;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isoqai T, Nishikawa T, Hayashi K, Saito K, Y. Sugiyama T, Wakamatsu A, Nagai K, Otsuki T:
                                                                                                                                                                                                                                                    1364 CTITCCACATGCATGAAGCCCAATGATGCGTGTACA 1399
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                                                                                                                                                                                                                                CTTTCCACATCCATGAAGCCCAATGATGCGTGTACA 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 8; SEQ 1D 14327; 2537pp + CD ROM; English.
 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                     duman cDNA sequence SEQ 1D NC:14327
                                                                                                                                                                                                                                                                                                                                                    AAB15834 standard: cDNA: 2293
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99JP-0300253,
2000JP-0118776,
2000JP-0183767,
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Matches 216; Conservative
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11-JAN-2000:
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               detection and/or diagnosis of the abnormality of the profession encoded by the full-length cDNAs. The primers allow obtaining of the full-length cDNAs easily without any specialised methods. AAB03166 to AAB13528 and AAB13633 to AAB13642 represent human colban sequences; AAB5446 to AAB95893 represent human amino acid sequences; and AAB13629 to AAB13632 represent oligonucleotides, all of which are used in the exemplification
                                                                                                                                                                                                                                          1 CCGCCGCCCCCCCCCASAGGTGGACTCCATCCASCTGCACASCTCCCAGCCATCTAGC
                                                                                                                                                                                                                                                                                    CAGGCCCTGACTCTCTCGAGCCAGCCCAGCCTCAACGCCTACAACTCACTGACAAGGTCG
                                                                                                                                                                                                                                                                                                  GGGCTGAAGCGTACGCCTCGCTAAAACCGGAAGTACTCCCAAAAACATCCTTTGCTCCT
                                                                                                                                                                                                                                                                                                                                                             Primer sets for synthesizing polynucleotides, particularly the 5692 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                Gabs
particularly full length oDNAs. The primers are also useful for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yamamoto J;
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                                                                                                                                                                100.0%; Score 216; DB 22; Length 2293; 100.0%; Pred. No. 3.6e-52; the 0; Mismatches 0; Indels 0;
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                                                                                                                                    Sequence 2293 BP; 579 A; 71: C; 581 G: 420 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                     1788 CITICOACAICCATGAAGCCCAATGATGGGGGGTAGA 1523
                                                                                                                                                                                                                                                                                                                                                                                                       CTTICCACATCCATGAAGCCCAATGATGCGTGTACA 218
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Sugiyama T, Wakamatsu A, Nagai K,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH17861 standard; cDNA; 2306
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11-JAN-2000, 2000JP-0118776,
02-MAY-2000, 2000JP-0183767.
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                                                                                                        of the present invention.
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                                                                                                                                                                            Local Similarity
es 216: Conserv
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comprises: (a) an oliquid primer and an oligonucleotide complementary to the componentary strand of a polynucleotide which comprises one of the SGO nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprises a 5'-end sequence and an oligonucleotide which comprises a 3'-end sequence complementary to a polynucleotide which comprises a 3'-end sequence where the combination of the 5'-end sequence 3'-end sequence, where the combination of the 5'-end sequence 4'-end sequence 5'-end sequence 5'-end sequence 5'-end sequence 6'-end 6'-end sequence 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end 6'-end
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full length cDNAs delined in the specification. Where
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 160.9%; Score 216; DB 22; Best Local Similarity 160.9%; Pred. No. 3.6e-52; Matches 216; Conservative 6; Mismatches 9;
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23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                  The invention relates to isolated polynuclootide (1) and polypeptide (11) Sequences. (1) is useful as hybridisation probes. polymerase chain reaction (PCR) primers, oligomers, and for chromosome polymerase chain reaction (PCR) primers, oligomers, and for chromosome can gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for restore normal activity of (II) or to treat disease states involving quantitation a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its bicking astions in calculation of quantitation a polypeptide in tissue, as molecular weight markers and as food supplement. (II) and its bicking astions in the polypeptide and polynucleotide sequences have applications in disposities, forensies, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity amino acid sequences. Assaignment of cheritats to assess biodiversity amino acid sequences. Assaignment of invenion.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic formal directly from WiPo at the wipo.int/pub/publisheilpol_sequences.
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                                                                     New isolated polynucleotide and encoded polypeptides, useful in
diagnostics, forensios, gene mapping, identification of mutations
responsible for genetic disorders or other traits and to assess
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190.0%; Prvd. No. 3.7e 52;
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                                                                                                                                                                                           Claim 1: SEQ 10 No 4057; 103pp; English.
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Matches 215, Conservative
WPI: 2001-639362/73.
                         P-PSDB; ABG04066
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The invention relates to isolated polynucleotide (1) and polyneptide (11) sequences. (1) is useful as hybridisation probes, polynerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (1) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for denorating antibodies against it detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a lood supplement. (II) and its binding partners are useful in medical inaging of sites expressing (II). (I) and (II) are useful in medical inaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in disorders for generic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and and activity and to produce other types of data and products dependent on DNA and and activity.
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Pest Local Similarity 106.0%; Pred, No. 3.8e-52;
Atches 216: Conservative 0; Mismatches 0;
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30-MAR-2001, 2001WO-US08631
                                                                              31-MAR-2000; 20000S-0540217
23-AUG-2000; 2000US-0649167
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                                                                                                                                                                                                                                                                            Drmanac RT, Liu C,
                                                                                                                                                                                                     (HYSE-) HYSEQ INC
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Matches
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                                                                                  polypeptide (II) Sequences. (I) Brusers, chromers, and for chromosome and gene mapping, and in recombinant production of (II). The and gene mapping, and in recombinant production of (II). The chromosome of polymertessed are also used in diagnostics as expressed sequence lags for in gene therapy inclining to infantifying expressed genes. (I) is useful in gene therapy inclining to restore normal activity or (II) or to treat disease states incolving (II). (II) is useful for generating antibodies against it, detecting or quantifating a polypeptide in issue as molecular weight markers and as a food supplement. (II) and its bluding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving abereals protein protein expression or bloadical activity. The polypeptide and polymericectics sequences have applications of diagnostics, forensics, dene mapping, identification of mutations and to produce other types of data and products dependent on DNA and among a polyperices. AASS4187-AASS4564 represent novel buman
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
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                         Human: chromosome mapping, gone mapping, gone therapy, forensic, food supplement, medical imaging, diagnostic, genetic disorder; ss
                                                                                                                                                                                                                                                                                                                            diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other trails and to assess
                                                                                                                                                                                                                                                                                                               New isolated polynucleotide and encoded polypeptides, useful in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3039 BP; 741 A; 869 C; 781 G; 648 T; C other;
DNA encoding novel human diagnostic protein #25525.
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                                                                                                                                                                                                                                                                                                                                                                                Claim 1: SEC ID No 25525: 103pp: Enqlish.
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                                                                                                                                                                                         23-AUG-2000; 2000US-0549167,
                                                                                                                                                  30-MAR-2601; 2601WO-US08631.
                                                                                                                                                                           31-MAR-2000; 2000US-0540217.
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                                                                                                                                                                                                                                                                       WPI; 2001-639362/73.
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Best Local Similarity
                                                                                                                                                                                                                   (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                      P-PSDB; ABG25534.
                                                                                            WO200175067-A2.
                                                                    Homo sapiens
                                                                                                                       11-0CT-2001
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The present inventions primer sets in synchrosishing store that it is comprises: (a) an oliqoid in the specification, where a primer set comprises: (a) an oliqoid of a polynoclectide which comprises one of it is sequences defined in the specification, where the oliqonuclectide sequences defined in the specification, where the oliqonuclectide comprises at least 15 nucleotides; or (b) a combination of an oliqonuclectide comprising a sequence complementary to the compilent strand of a polynuclectide which comprises a 5'-end sequence and an oliqonuclectide which comprises a 5'-end sequence. Where the polynuclectide comprises a 1'-end sequence, where the compinions at least 15 nucleotides and the combination of the 5'-end sequence/3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers allow obtaining of the full-length.
                                                                                                                                                                                                                                                                                           Human; primer; detection; diagnosis; antisense therapy; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB95893 represent human amino acid sequences; and AAH13629 to AAH13632 represent oligonucleotides, all of which are used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNAs easily without any specialised methods. AAH03166 to AAH13628 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Primer sets for synthosizing polynucleotides, particularly the 5602 tull-length CONAs defined in the specification, and for the detection and for the election and for the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamamoto J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sets for synthesising 5602
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ć
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saito K, Y. Y. Otsuki I;
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100.0%; Pred. No. 3.8e-52;
ive 0; Mismatches 0;
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Wakamatsu A, Nagai K,
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                                                                                                                                                                                                                    Human cDNA sequence SEQ ID NO:17153
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AAH17625 standard; conk; 3041 BP.
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Sugiyama T, Wakamatsu
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27-AUG-1999; 99.2F-0300253.
31.JAN-2000. 200.04P-0118776.
02-MAY-2000. 200.04P-0183767.
05-JUN-2000. 200.04P-02418999.
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                                                                                                                                        26-JUN-2001 (first entry)
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Ishii S,
                                                                       AA::17625;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human semaphorin protein-like splice variant SFCX 2864933-2 DNA.
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P-PSDB: AAB23031.
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or genetic lesions in the SECX gene. They may also be used to modulate SFCX expression (e.g., using antisense cligonucleotides). SECX nucleic acid sequences are also useful for identifying a cell or tissue type in a biological sample, and in forensic biology. SECX primers or probes are useful for detecting the presence of SECX nucleotides and for screening tissue cultures for contamination. Diseases that may be treated or prevented using SECX pricins or nucleotides include cancer (e.g., colorectal carcinoma, prostate cancer), benugn tumburs, inmane diseases, transplant rejection, allergies, AIDS), findications, inflammatory disorders, arthritis, hemmatopoletic disorders, skin disorders, cardiovascular disorders, atherosclerosis, restenosis, surgical or traumatic wounds, spinal cord injury), and skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SECX protein, human, secreted, membrane-associated, cancer, proliferation regulator; differentiation regulator; non-malignant lumour, inmune disorder, autoimmune disease; transplant rejection; allergy, AIDS, infection; offlammatory disorder; arthritis; haematopoietic disorder; skim disorder; cardiovascular disorder; atherosclerosis; restenosis; negrological disease; Alcheimer's disease; trauma; wounding; spinal cord injury; skeletal disorder; extostatic; immunosuppressive; anti-HIV; antiniciammatory; antialtatic; antimicrobial; cardiant;
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100.0%; Pred. No. 3.9e-52;
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18-DEC-1996;
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                                                                                                                                                                                                                                                                      Sequences AAA93616-A93631 and AAA93673-A93696 represent nucleic actds which encode human SECX proteins (AAB23029-B23048). The SECX proteins of the invention are officer secreted or membrane-associated proteins and act as regulator of cellular proliferation and differentiation. SECX proteins or nucleotides are useful for diagnosing the presence of, or predisposition to, a disease associated with altered levels of SECX proteins are also useful to screen compounds that modulate SECX activity or expression. The interaction of a SECX protein with order collular proteins may be useful to modulate of the activity of a partner protein, cellular profileration, cellular combinant expression of SECX protein, and may be used detect SECX minns or agencie visations in the SECX protein, and may be used detect SECX minns or agencie visations in the SECX protein, and may be used detect SECX minns or generic visations in the SECX protein, and may be used detect SECX minns or agencies are also useful for identifying a cell or tissue type in a cid sequences are also useful for identifying a cell or tissue type in a beful asmitte, and in forensic biology. SECX primers or provence duals SECX proteins or bloody. SECX primers or provence useful carcinoma, prostite cancer, benigh the presence of SECX nucleotides and for screening tissue cultures for contamination. Discases that may be treated or provenced asmits SECX proteins or nucleotides and for screening tissue cultures for contamination. Discases that may be treated or nucleotides and disorders, athir disorders, restencies, askin disorders, cardiovascular disorders, atheroscierosis, restencies, askin disorders, cardiovascular disorders atheroscierosis, restencies, askin disorders contaminatic wounds, spinal cord lithury), and skeletal
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                                                                                                Novel human membrase associated or secreted polypeptides and polymocleotides useful for diagnosis, proventian and treatment pathological states such as cancer, immune, cardiovascular and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         isolated from a human fetal brain cDNA library. This protein has applications for nutritional use, cytokine and ceil proliferations for nutritional use, cytokine and ceil proliferations/differentiation activity, immune stimulating or suppressing activity, hemetopolesis regulating activity, tissue growth activity, activity, chemotactic/chemokinetic activity, amenastatic and thrombotic activity, receptor/dignid activity, articlingharmatory activity, readherin/tumour invasion suppressor activity, timour invasion suppressor activity, and other activities.
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tissue growth; activin; inhibin; haemostatic;
thrombosis; receptor; cadherin; tumour;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotides and secreted proteins - obtained from human foetal brain, human adult testes, human adult brain and human adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  this sequence encodes a novel secreted protein from clone CJ145_1
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                                                                                                                                                                                                                                                                                  /product secreted protein /note- "isolated from clone CJ145_1"
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Treacy M;
                                                                                                                                                                                     Cocation/Qualifiers
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AAF98469;

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Human, secreted protein, natrient, cytokine modulator, proliferation, differentiation, immune system modulator; tissue growth; chemotacile, haemostatic; thrombolytic; anti-inflammatery; tumour inhibition; ss: haematopolesis.
                       Human cDNA clone CJ145_1 sequence SEQ ID 160
                                                                                                   14-SEP-2000; 2000WQ-US25135.
            (first ontry)
                                                                            WO200119988-A1.
                                                                 Home sapiens
            07-JUN-2001
                                                                                        22-MAR-2001
                                                                                                                                             Merberg D,
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Cullius Racie IA, Evans Spaulding V, Adostino MJ; LaVallie ER, Rowman MK. 9908-0396829. (GEMY) GENETICS INST INC McCoy JM. Treacy M. WPI; 2001-244801/25 P-PSDB; AAB90731. 17-SEP-1999;

Human cDNA clones represented in AAF98334 - AAF98439 encode secreted proteins ABB9667 - AAB90756. The cDNA clones are isolated from various tissue types, and may be used in the prevention, treatment and diagnosis of diseases associated with imappropriate protein expression. The polypeptides and nucleic acids may be used as nutriouts or to machinate cytokine and cell proliferation/differentiation activity and may also be involved in modulation of the immune system. The cDNA sequences, proteins, their agonists and/or antagonists exhibit haematopoicsis regulating activity; tissue growth activity; activin/inhibin activity; chemotactic/chemokinein activity; haemostatic and thrombolytic activity; and activity; and inflammatory activity and activity and inflammatory activity and rumour inhibition activity. Included in the invention are probes Isolated nucleic acids encoding polypeptides, aseful for modulating e.g. cytokine and cell proliferation/differentiation activity, the immune system and hematopolesis regulating activity. Disclosure: Page 486-487; 557pp: English. encoding the secreted proteins

Sequence 3550 BP; 957 A; 994 C; 856 G; 742 T; 1 other;

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2 Crontier Korean EST Project 2001
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Korea Research Institute of Rioscience & Biotechnology
52 Ecoun-dong Yuseong-gu. Daejeon 305-333, South Korea
Fax: +82-42-866-4410
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AV704776 ADB Homo saptens cDNA clone ADBBJC04 5', mRNA sequence.
AV704776
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1 (Jases 1 to 496)
Pengyl, Song, H., Hhargyl, Huanestl, Gill, Yang, Y., Sabutl, Miase, H., Xu, X., El, N., Olen, B., Liu, F., Call, Gab, X., Chenell, Xill, Seng, L., Xu, S., Sun, W., Tan, Y., Sill, S., Wall, W., Call, W., Sabutl, Chenell, S., Shond, M., Call, Chenell, Chen
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Contact: Zeguang Han
Contact: Zeguang Han
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Contact: Zeguang Han
Contact: Zeguang Han
Contact: Zeguang Han
Shouping Road, Zhangjiang H: Tech Park, Pudoma: Shoughts
201203, p. R. China
Tel: 86-21-50801952
Fax: 86-21-50801922
Email: Hanzg@chgo.sh.cn
This clone is available at CHGC in Stangtai.
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/cloce_iib="NHH_MGC_109"
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Xhol; con made by oligo-dT priming. Directionally cloned into EcoRI/Xhol sites using the following 5' adaptor:
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Eukarycta; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 915)
NTH:MGC http://mgc.nci.nih.gov/.
NATi:MGC http://mgc.nci.nih.gov/.
Unpublished
                                                                                                                                                    /clone_lib-"ABB"
/noter_learWector: pBluescript sk(-); Site_l: BcoRI; Site_2:
Xbot*
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Airc
cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bisseience Corporation
Clone distribution: MC clone distribution information cloud through the L.M.A.G.E. Consortium/LLNL at:
ECTP://mage.llnl.gov
Plate: LICM2832 row: b column: 18
High quality sequence stop: 700.
Location/Ovalifiers
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AGENCCURT_10438272 NIH_MGC_109 Homo sapiens cDNA clone
IMAGE:6598770 5', mKNA Sequence.
                                                                                                                                                                                                                                                                                                         Length 496;
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/db_xref="taxon:9696"
/cione="IMAGE:6598770"
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328

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Gaps

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library, non-amplified. Library constructed by Life Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine); available through lite
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Email: cdapks-rémais.nis.gov
Tissue Procurement. DCTP/CTP
CDNA Library Preparation: Linq Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC tone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LL/MBGD row: c. column: i4
High quality Sequence Stop: 794.
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AGENCOURI_8099701 Lupski_sympathetic_trunk Homo sapiens cDNA close
IMAGE:6190272-57, mRNA sequence.
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//note-'vector: pcWv-SPORTG (Lite Technologies); Site_l:
Not1: Site_2: Sall: cDNA made by oligo-dr priming.
Directionally cloned using the following adaptors:
Directionally cloned using the following adaptors:
S'-TGCACCACCACCGCA's and
S'-GACTAGTTCTACATCCACCGCGCGCCCT(15)-3'. Size selected >
1 kb for average insert length 1.9 kb. This is a primary
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo
GGCACGAG(G). Library constructed by Linq Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA Synthosis kit (Stratasone) and Superscript II RT (Life Technologies). Note: This is a NIH-MOC Library."
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NIH-MGC http://mgc.nci.nth.gov/.
National Institutes of Bealth, Mammalian Gene Collection (MGC)
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Tissue Probusement: fr. James R. Jupski
Tissue Probuctement: fr. James R. Jupski
CDNA Library Prepartion: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Conscribe
Clone distribution: MGC clone distribution information: each
found through the I.M.A.G.E. Conscribingion information: each
http://image.llh.gov
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High quality sequence slop: 592.
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/dev_stage="adult, 16 yr"
/lab_host="EH10B"
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/issuc_rype.*melanocyte"
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//iab host-"DH10B (arpicillin resistant)"
//iobe=lbb.*Scares melanocyte 2NbHW
//cote="Vector: p7713D (Pharmacia) with a modified
//cote="Vector: p713D (Pharmacia) with a modified
polylinker: Site=l: Not I; Site=2: Eco RI; Ist strand cDNA
was primed with a Not I: oligo(dT) primer [5;
double-stranded cDNA was size selected, ligated to Eco RI
adapturs (Pharmacia), digested with Not I and cloned into
the Not I and Eco RI sites of a modified p77T3 vector
(Pharmacia). Library constructed by Bento Soares and
M.Patima Honaldo. RNA from normal foreskin melanocytes
(FS74) was kindly provided by D: Anthony P. Albino."
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I toases: 1 to 494)
Eillieria: Clark, Dibique, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rikin, I., Rohlfing, T., Soares, M., Tan, F., Trevaskis, E., Materston The Washu-Merck ESI Project
Unpublished
41 CAGGOOGTGACTGTCGGAGGCGAGCCTCAACGCCTACAACTCACTGACAAGGTCG 120
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                                                                                                                                                                                                                                                                                                                                                                                                  Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MC 53108 Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
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Eukaryota: Metazoa; Chordata; Craniata: Vermebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

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NIH MGC http://mgc.nci.nih.gov/.

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National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: Dilb/DTP
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incytto Genomics, Inc.
Clone distribution: WGC clone distribution information can be
found through the 1.M.A.G.E. Consortium/LLNL at: Image.llul.gov
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No. 1.2e-47;
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Hillor, Clark, N. Dubuque, T., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, S., Marra, M., Parsons, J., M., Hultman, M., Kucaba, T., Le, M., Lennon, S., Marra, M., Parsons, J., Rifkin, T., Rohling, T., Soares, M., Tan, F., Tevaskis, E., Waterston, K., Will Lamson, A., Wohldmann, P. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                  121 GGGCTGAAGCGTACGCCCTCGCTAAAGCCGGACGTACCCCCAAACCATCCTTTGCTCCC 180
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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Source: IMAGE Consortium, LLNL
This clone is available royalty-tree through LLNL; contact the
IMAGE Consortium (info@image]llnl.gov) for further information.
Insert Length: 1117 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                            61 CAGGCCGTGACTGTCGAGGCAGCCCAGCCTCAACGCTACAACTCACTGACAAGGTCG
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                                                                                                                                        Score 212.8; DB 11; Length 6875;
Pred. No. 1.7e-46;
: Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MD 63108
Tel: 314 286 1800
Fax: 314 266 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18] CTTTCCACATCCATGAAGCCCAATGATGCGTGTACA 216
                                             /note:"Vector: pCMV-SPORT6"
1795 c 1592 g 1704 t
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Location/Gualifiers
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/db_xref-"GDB:3872107"
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                          /lab_host="DH10B"
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cal Similarity 99.1%;
214; Conservative 0
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Contact: Wilson RK
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This clone was selected for full length sequencing because it assed the following selection criteria: matched manA qi: 11991659 This clone has the following problem: retained intron.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ochtact: Disc_mqc%nhyrl.nih.gov/
Contact: Disc_mqc%nhyrl.nih.gov/
Akiter.N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin.B.,
Abiter.N., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granita,S., Guan.X., Gupta,J., Haphight.P.,
Hansen.N., Ho.S.-L., Karlins,E., Kwong,P., Laric,P., Loqaspi.R.,
Maduro,Q.L., Masklei,D., Naskrian,S.D., McCloskey.J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.K.,
Tsurgeon,C., Voqt.J.L., Walker,M.A., Wethorby,K.D., Wiggins,L..,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC032619 6875 bp mRNA linear HTC 04-MAR-2003
Homo sapiens, similar to sema domain, transmembrane domain (TM),
and cycoplasmic domain, (semaphorin) 5A, clone IMAGE:5578666, mRNA,
BC032619
                                                                                                                   61 CAGGCGGTGACTGTCTCGAGGCCAGCCTCAACGCCTACAACTCACTGACAAGGTC3 120
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                                                                                      Direct Submission
Submitted (06-JUN-2002) National Institutes of Health, Macmalian
Gene Collection (MGC), Cancer Genemics Office, National Darcer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 72892-2590,
                                               Gaps
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/tissue_type="Skin, melanotic melanoma."
/clone_lib="NIH_MGC_72"
                                             indels
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Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                          240 CITICACACATCCATGAAGCCCAAIGAFGCGTGTACA 275
Fred. No. 1.8e-47;
                                                                                                                                                                                                                                                                                                                                                                  181 CTTTCCACATCCATGAAGCCCAATGATGCGTGTACA 215
                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cqapbs-r@mail.cih.gov
Tissue Procurement: AICC/DCTD/DTP
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                185.66
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                                             Conservative
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                     Best Local Similarity
Matches 215; Conserv
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Clery Match
Rest Local Similarity 98.1%;
Matches 206; Conservative 0
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Best Local Similarity 93.55
Matches 262, Conservative
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/clone_lib="Soares mclancoyte [NBHM]
/clone_lib="Soares mclancoyte [NBHM]
/clone_lib="Soares mclancoyte [NBHM]
poiylinker: Site=[1: Not I; Site_2: Eco RI; Ist strand cDNA was primed with a Not I - oliqo(dT) primer [5]
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double-stranded cDNA was size sciected, ligated to Boo Ri
adapters (Pharmacia), digested with Not I and Cluned into
the Not I and Exp RI sites of a modified pT713 vector
(Pharmacia), Library constructed by Hosto Spares and
M.Fatina Bonaldo, RNA from cornel loreskin melanorytes
(F8374) was kindly provided by Ex. Anthony P. Albino."
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Hillier.L., Clark.N., Dubuque,T., Elliston,K., Hawkins,K., Holman
Hillier.L., Clark.N., Dubuque,T., Elliston,K., Hawkins,K., Holman
M., Hultman,M., Kucaka,T., Le.M., Lencon,G., Marra.M., Parsons,T.,
Rifkin,L., Pohlifing,T., Soares,M., Tan,F., Trevaskis,E., Waterston
,R., Williamson,A., Webloman,P. and Wilson,R.
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This clone is available royalzy-free through LLNG : contact the
IMAGE Consortium (info@image:info@image) for further information.
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yy35a05.rl Soares melanocyte ZNDHM Homo sapiens CUNA clone
1MAGE:273200 5', mrna sequence.
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                                                                                                                                                                                                                                                                                            Score 212: DP 34: Longth 462;
Prod. No. 1.10-16;
2; Mismanches 4; Indels (
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Washington University School of Medicity,
W444 Forest Park Parkway, Box 8501, St. 1
Tel: 314 286 1810
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High quality sequence stop: 329,
Location/Ocalifiers
1, 416
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/db_xref="db=:3882842"
/db_xref="taxon:9606"
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Best Local Similarity 94.1%:
Matches 212: Conservative
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138 GTOACTGTCTCGAGGCAGCCAGCCTCAACGCCTACAACTCACTGACAAGGTCGGGGCTG 197
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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213 c 151 g 113 t
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Tel: 805 447-4881
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                                                                                                                                                                               Score 203.6; DB 14; Longth 410;
Pred. No. 1.9c-44;
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/tissue_type="Chung Model Ipsilate"
/clone_lib-"cdrg1 (10858)"
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/mol_type "mRNA"
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93.5%; Pred. No. 1.1e-
tive 0; Mismatches
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    Mismatches

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Location/Qualifiers
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Rattus norvegicus
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MAGNNUC:MRES-03075-D4-WY placenta embryo D17 (19379) Rattus
norregicus china cione mrpe3-00075-d4, mRNA sequence.
CR605522
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Rukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutherla; Rodentia; Schurognathi; Muridae; Murinae;
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                                                                                                                                 2 CCACCCCCGCCCCCCCGCAGCGGGGGGGGGCTGAGCTCCAGCCCCCGAGCCCCCGGGGCCCCCGGGG
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Jel: 805 447-4881
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/cote="Vector: pSPORT; placenta embryo D17"
f89,c 689,c 2 others
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Pred. No. I.le-41;
O. wiematches 14: Indels
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/mol_type="mRNA"
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Contact: Dan Fitzpatrick
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1 (bases 1 to 2411)
Amgeu EST Program.
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         93.58;
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Inwa
Tissue Procurement: Dr. Jim Lin, University of Inwa
CDA Library preparation: Dr. M. Bonto Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bonto Soares, University of Iowa
DNA Sequencing by: Dr. M. Bonto Soares, University of Iowa
Clone Distribution: MGC clone distribition laformation can be
found through the I.M.A.G.E. Consortium/Linn at:
                                                                                                                                                                 This close was contributed by the Brain Molecular Anatomy Project
                                                                     121 GGGCTGAAGGGTACGGCTVCGCTAAAGCCGGAGGTACCCCCCAAACCATGCTTTGCTCCC 180
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Mus musculus
Bukaryota, Metazoa, Dhordata; Craniata; Vertebrata; Eutoleostom;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Muss.
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Muss.
Mammalia; Lo 711)
NHF-MGC http://mgc.nbi.nih.gov/.
National Institutes of Health, Marmalian Gene Colicction (MGC)
         The following repetitive elements were tound in this cONA
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/mol_type="cRNA"
/straic="c59BL/6"
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ORGANISM

SOURCE

REFERENCE AUTHORS TITLE JOURNAL

COMMENT

DEFINITION

ACCESSION VERSION KEYWORDS

RESULT 12 CB246380

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Query Match

BASE COUNT

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/Glome_iib="NIH-MGC_125"
/folde="Organ: ovary (pool of 3): Vector: pCMV-SPORT6;
Site_1: EcoRV (destroyed): Site_2: Not1: RNA source pool
of three ovaries, from females ranging in age from 38 to
49 yo. Library is oligo-dT primed and directionally cloned
frooRv Site is destroyed upon choning). Average insert
size 2: kb, insert size range 1-3:5 kb. Library is
normalized and enriched for full-length clones and was
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AGENCOURT_6497980 NIE_MGC_125 Homo sapiens cDNA cione lMAGE:5588479
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I (bases 1 to 1183)

NIE MCC http://mac.nci.nih.gov/.
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Contact: Robert Strausherg, Ph.D.
Contact: Robert Strausherg, Ph.D.
Tissue procurement: Unvitrogen
CDNA Library Proparation: Life Technologies, Inc.
CDNA Library Proparation: Life Technologies, Inc.
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CDNA Library Proparation: Life Technologies, Inc.
CDNA Library Proparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LINL
DNA Sequence Governor Ribscience Corporation
Close distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
http://mage.ini.gov
Plate: LLAM12359 row: k column: 08
High quality sequence stops: 725.
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Woods. JA Green, RS Prather S142 Animal Science Research Center.
Department of Animal Science. University of Missouri-Columbia.
652li Clone distribution: clones will be available through Research
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Best_Local Similarity 61.3
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Coding Sequence 1...1968

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1971 base pairs

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TYPE: nucleic acid STRANDEDNESS: single MOLECULE TYPE: CDNA

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NUMBER OF SEGGENCES: 61
CORRESPONDENCE ALDRESS:
ANDRESSEE: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
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ATTORNEY/AGENT INFORMATION:
NAME: Plant, Thomas, G.
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LOCATION: 350..13987
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US-08-804-2270-13
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Rest Local 5
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APPLICANT: AFSURIA, ASSURIA, A
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Patent No. 587691
GENERAL INFORMATION:
APPLICANT: Minstos, Stuart A.
APPLICANT: Rosteck, Stuart A.
APPLICANT: Rosteck, Stuart A.
APPLICANT: Sutton, Kimberly L.
TITLE OF INVENTION: POLYKETIDE SYNTHASE GENES
NUMBER OF SEQUENCES: 15
                                                                                                                                                                                                   52 CGTCGGCGCGCGCCCAGCCCASCAGCA 20
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APPLICATION NUMBER: US/09/804,227C FILING DATE: February 21, 1997 CLASSIFICATION: 435
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ADDRESSE: TEGNAS G. PLAN: 15G1
STREET: LILLY CORPORATE CHYTER
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7, Application US/088182528
Patent No. 6197928
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Best Local Similarity 61.3%;
Matches 57; Conservative 0
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US-08-818-252-7
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US-08-804-227C-13/c
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APPLICANT: DeHoff, Bradley S.
APPLICANT: RUBICOSS, Stuart A.
APPLICANT: ROSteck, Paul R., Jr.
APPLICANT: BOLLON, Kimberly L.
TITLE OF INVENTION: POLYKETIDE SYNTHASE GENES
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: THOMAS G. PLANT iSO1
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
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                                                                                                      REFERENCE/DOCKET NUMBER: X-8231
TELECHMOIGATION INFORMATION:
TELEPHONE: 317-276-2459
INFORMATION FOR SEO ID NO: 2:
                                                                                                                                                                                          X · 8231
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CLASSIFICATION: 435
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                                                                                                                                                   REFERENCE/DOCKET NYBEER: X-82.
TELECOMMUNICATION INFORMATION:
TRIEFPHONE: 317-276-2459.
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 13987 base pairs
TYPE: ALCIDEC ACID.
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APPLICATION NUMBER: US/08/804,
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NAME: Plant, Thomas, G. REGISTRATION NUMBER: 35,784
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Sequence 8905, Application US/09252991A
Facent No. 6551795
GENERAL INFORMATION:
AFFILICANT: MAIC J. RUBERLICER OF AL.
FITLE OF INVENTION: MICLETC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONITUE. OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                745995 GOGTATUCCTOGUAGAGGGCCAGCTAGCTAGCTACCCGGCGGCGGATCAGCTGGCGG 745936
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                         22 GIGGACTCCATGGAGGTGCCAGGTGCCAGGATGTGGGCCAGGGGGTGAGTGTCTGGAGG 81
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GENERAL INPORMATION:
APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: WITTE, OWEN R.
APPLICANT: WITTE, OWEN R.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 2436-20007.00
CUBRENT APPLICATION NUMBER: US/09/103,840A
CUBRENT FILIKG DATE: 1998-06-24
NUMBER OF SEQ 10, NOS: 2
                                                                                                                               74.3978 COGTOCTGCACCAGGACGCCCGCCCACGCTCGGGGTCGACG 74.3928
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Pred. No. 0.72;
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1099-02-18
PRIOR FILING TOWN NUMBER: US 60/074,788
PRIOR FILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/094,193
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 8908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA OKGOBACLETIUM tuberculosis OTHER INFORMATION: H37Rv
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ORGANISM: Pseudomonas aeruginosa
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Best Local Similarity 49.2%;
Matches 89; Conservative
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US-09-103-840A-1/c
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APPLICANT: FRASER, Claire M.
APPLICANT: FEATER, Claire M.
APPLICANT: FEATER, Claire M.
APPLICANT: FEATER, Claire M.
APPLICANT: VENTER, Colon C.
TITLE OF INVENTION: TUBERCULOSIS
FILE REPERENCE: 24366-22007.00.
CURRENT APPLICATION UNHEER: US/09/103.840A
CURRENT APPLICATION UNHEER: US/09/103.840A
SOFTWARE: PAFEDIN CONS: 2
SOFTWARE: PAFEDIN Ver. 2.:
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Pred. No. 4.2;
0; Mismatches 46; Indeis 0;
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Pred. No. 0.78;
0; Mismatches 103;
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Patent No. 629428
GENERAL INFORMATION:
APPLICANT: FIEISCHMAN, Robert D.
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                                                                                TOPOLOGY: linear MOLECULE TYPE: DNA (genomit)
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Best Local Similarity 49.5%;
Matches 97; Conservative (
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OTHER INFORMATION: "n" bases
OTHER INFORMATION: represent.
                     LENGIH: 43280 base pairs
TYPE: nucleic acid
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14351..19945
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20C10..31199
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31232..36067
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36249..41774
SEQUENCE CHARACTERISTICS
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Best Local Similarity
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US-09-103-840A-2/c
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LOCATION:
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APPLICANT: MATC J. Rubenfield et al.
APPLICANT: MATC J. Rubenfield et al.
TITLE CF INVENTION: NUCLEUC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONI
TITLE CF INVENTION: AUGUSTAND AMINO ACID SEQUENCES RELATING TO PSEUDOMONI
TITLE CF INVENTION: NUCLEER: US/09/252.991A
CURRENT APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
NUMBER OF SEQ ID NOS: 33142
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Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Ruberfield et al.
APPLICANT: Marc J. Ruberfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONA
TITLE OF INVENTION: ARRUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: 107196.136
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                                                                                     Score 33.8; DB 4; Length 2567; Pred. No. 0.96; Dr Mismatches 92; Indels C.
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Patent No. 6551795
                         ) ORGANISM: Pseudomonas aeruginosa
IIS-09-252-991A-9254
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Matches 68; Conserv
                                                                                                            Socal Similarity
as 89; Conserv
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TITLE OF INVENTION: NUCLEIC ACLE AND AMINO ACID SEQUENCES RELATING TO PSEUD. MONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: 107196-136
CURRENT APPLICATION NUMBER: US 60/0742,788
PRIOR FILING DATE: 1999-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
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Patcor to 7. Rubenfield et al 7711LE OP INVENTION: NUCLEER ACID AND AMINY ACID SEQUENCES FILE PATCOR TO FERENCE: 107156.136
CURRENT APPLICATION NUMBER: 05.901A
CURRENT FILING DATE: 1999-62.8
PRIOR APPLICATION NUMBER: 05.60704.788
PRIOR APPLICATION NUMBER: 05.60704.788
PRIOR APPLICATION NUMBER: 05.60704.130
PRIOR FILING DATE: 1998-67-27
NUMBER OF EXO ID NOS: 33142
LENGTH: 1026
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                                                                62 ASSCCGTGACTGTCTCGACGCASCCCAACCTCAACGCTACAACTCACTGACAAGGTCGG 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 9254, Application US/09252951A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRGANISM: Pseudomonas aeruginosa US-09-252-991A-1737
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LENGTH: 2667
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Best Local S
Matches 68
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us-09-856-681-3.rni

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APPLICANT: MATC. Fubecifeld of al.
TILLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMON
TITLE OF INVENTION: AFRICANCY OF SERVICES AND THERAPEUTICS
FILE REFERENCE: 137196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQUENCE SEQ
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FILE REPREBACE: 107196/136

CURRENT APPLICATION NUMBER: 05/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRICE APPLICATION NUMBER: 05/074,788

PRICE PILING DATE: 1996-03-18

PRICE PILING DATE: 1996-03-18

PRICE PILING DATE: 1996-03-18

PRICE PILING DATE: 1996-07-27

NUMBER OF SEQ ID NOS: 33142
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; Patent No. 6557795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
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ORGANISM: Pseudomonas aeruginosa
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Matches 71, Conservative
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APPLICANT: Marc J. Rubenfiels et al.

APPLICANT: Marc J. Rubenfiels et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SECTEMBES ARIATING TO ESCIPCIONAS

TITLE OF INVENTION: NUCLEIC ACID AND THERAPECTICS

FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DAIE: 1999-62-18

PRIOR FILING DAIE: 1998-02-13

PRIOR FILING DAIE: 1998-07-27

NUMBER OF SEQ ID MCS: 33142

SEQ ID NO 7012
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CURRENT APPLICATION NUMBER: 03/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: 73 60/074,768
PRIOR FILING DATE: 1999-02-13
PRIOR FILING DATE: 1999-07-27
NUMBER: 05 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER: 05 10 NOS: 33142
; SEQ ID NO 2143
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Pred. No. 1;
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Patent No. 6551795
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                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Pseudomonas aeruginosa
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54.4%;
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Best Local Similarity 54.49
Matches 68, Conservative
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US-09-252-991A-7012/c
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US-09-252-991A-7061
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Sequence 29, Application US/C8693359A
Fatent No. 639942
GENERAL INFORMATION:
APPLICANT: Lassen, Soren F.
APPLICANT: Bech. Lisheth
APPLICANT: Breinhoit, Jens
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EARLIER FILING DATE: 1996-12-20
EARLIER APPLICATION NUMBER: 1481/96
EARLIER APPLICATION NUMBER: 1386/97
EARLIER APPLICATION NUMBER: 1386/97
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ORGAKISM: Trametos puboscens
FEATURE:
NAMEKEY: CDS
LOCATION: (79)...(1407)
NAMEKEY: mat_peptide
LOCATION: (130)...(1407)
NAMEKEY: sig_peptide
LOCATION: (79)...(129)
US-08-993-359-29
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71 CTGTCTCGAGGCAGCCCAGGCTCAACGCCTACAACTCACTGACAAGGTCGGGGGTGAAGC 130 δy qq

131 GIACGCCCT 139 Çλ

Search completed: September 36, 2303, 22:06:17 Job time : 27.4914 secs

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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Human semaphorin 6a-1 (sema6a-a), a gene involved in neuronal development and regeneration mechanisms during apoptosis, and its 1

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Submitted (10-MAY-2001) Takao Isogai, Helix Research Institute, Submitted (10-MAY-2001) Takao Isogai, Helix Research Institute, Genomics Laboratory: 1532-3 Yana, Kisarnzu, Chiba 292-0812, Japan Chaniligenomicstrico.jp. Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO humar cDNA sequencing project supported by Mnistry of Economy, Trade and industry of Japan, CDNA full insert sequencing: Research Association for Biotechnology: cDNA full insert sequencing: 6' * A i'-end one Fass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Center etc.) and Department of Virology, Institute of Medical Science,
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/clone_lib-"NT2RM2"
/note-"cloning vector: pUCl9FL3-mRNA from uninduced NT2
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Homo sapiens CDNA FLJ14533 fis, clone NT2RM2000467, moderately
similar to Mus musculus semaphorin VIa mRNA.
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1 (bases 1 to 2123)

1 to 2123; To 2123;

1 to 2123; To 2123;

2 to 2123; Sugiyama, T., Nishikawa, J., Bayashi, K., Saito, K., Yamanoto, J., Ishii, S., Sugiyama, T., Makamats; A., Naqai, K. and Ctsuki, T. Primer for Synthesizing full:length CDNA and use Thereof HBLIX RESEARCH INSTITIE

CS Homo sapiens (humai)

PN 19 200121363-A/10630

PP 28-JUL-2002

PP 28-JUL-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JUNICHI YAMAMOTO, SHIZUKO ISHII, TOMOYASU SUGIYAMA, AL MAKAMATSU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC12P21/02,C12Q1/58//C12P21/06.G06F17/30.C12N15/C0,C12N5/C0 CC
Primer for synthesizing full longth CDNA and use thereof FH Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OSHIO CTA, TAKAG ISCGAI, TETSUO KISHIKAWA, KOJI HAYASHI, KADRU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAGGCCGTGACTGTCTCGAGGCAGCCGGAAGGGCTGAAGGGCTTAGAAGTGAGAAGGTGA
use as a potential drug target
Patenti Mo 031252-A 3 02-JÜN-2000;
KLOSTERMANN ANDREAS (DE) : MAX PLANCK GESELLSCHAFT (FF) : HEEL
CHRISTIAN (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sque to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Primer for synthesizing full-length cDNA and use thorsoft. B0155987. G1:27691745 HD 2002191363-A/10830. HOMO SAMAGARA A/10830.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%: Score 216: DR 6: Lougth 214; Best Local Similarity 100.0%: Pred. No. 1.10-41; Matches 216; Conservative 0; Mishatches 0; Indels 0
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                                                                                                                                                                                                                                                                                                                                            /note="unnamed protein product"
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/db_xref "texon:9606"
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Submitted (25 MAR-2022) Takao isogai, Helix Rescarch Institute, Genomics Laboratory; 1532-3 Yana, Kisarazu. Chipa 292-9812, Japan Genomics Laboratory; 1532-3 Yana, Kisarazu. Chipa 292-9812, Japan (E-mail:genomics@Hri.co.jp, Tel:81-438-52-3955, Fax:81-438-52-3965) NEDO human cDNS sequencing project supported by Ministry of Sconomy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology; cDNA full insert sequencing: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; cDNA 5' & 3' end one pass sequencing and clone selection: Helix Research Institute (supported by Japan Key Technology Center etc.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       isogai,T., Cta,I., Nishikawa,T., Hayashi,K., Ctsuki,T., Sugiyama,T., Suzuki,Y., Nagai,K., Sugano,S., Ishii,S., Suzuki,Y., Nagai,K., Samanoto,J., Wakamatsu,A., Nakamura,Y., Kojima,S., Nagahari,K., Masuho,Y., Oro,T., Okono,K., Yoshikawa,Y., Actsuka,S., Sasaki,N., Hattori,A., Okumura,K., Iwayanagi,T. and NEDD Sumac chark sequencing project
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Mammalla; Futheria: Primates; Catarrhini; Hominidae; Homo.
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/clone_lib~"m72kp3"
/notc-"cioning vector: pWE18SFLJ-mRNA from NT2 neuronal
precursor cells after 2-weeks retinoic acid (RA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAGGCCGIGACTGTCTCGAGGCAGCCAGCCTCAACGCCTACAACTCACTGACAAGGTCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2227;
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Homo sapiens CDNA FLJ90494 fis, clone NT2RP3003614.
AK074975
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                                                                               1. 2227
/organism-"Homo sapiens"
/ob_type-"genomic DNA"
/db_xref-"taxon:9605
a 706 c 560 q 400
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/db_xref="taxon:9606"
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/cell_line="NT2"
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Direct Submission
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216: Conservative
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HILSEKSPNHVNLVBRALDSPRVPOREASIOSPRARLSGYOLEKRLEMHHSSSYGVD
YKRSYPTNSITTSHQATTIKRNYTNSSNSHILSKNQSFGRGONPFAPQRVJSICVHS
SOPSOQAVVVSRQSTATIKRNYTNSSNSSHILSKNOVPFKRSFAPLSTSMKFNDACT**
664 c 528 q 381.
                                                                                                                                                                                                                    /protein_id="BAB5511.1"
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Homo Sapiens
Enkaryota: Motazoa: Chordata: Graniutus Vortebrata; Eugeleosigni;
Mammalia: Eutheria: Primatos: Cadarrinis: Rominidae: Homo.
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Primer for synthesizing full-length CENA and use thereof Patent: JP 2002017375-A 2025 22-JAN-2002;
HELIX RESEARCH INSTITUTE
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Ota.T., Nishikawa.T., Isogal.T., Hayashi.K.. Ish
Wakamaise,A., Sugiyama.T., Nagal.K., Kojima.S.,
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JP 2002017375-A/2825
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Direct Submission

No Submission

Conomics Laboratory 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan

Genomics Laboratory 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan

NEDC human cDNA sequencing project supported by Ministry of

Economy, Trade and Industry of Japan; CDNA library construction,

S'-6 3'-end one pass sequencing and chone selection: Helix

Research Institute (supported by Japan Key Technology Center etc.)

and Department of Virology, Institute of Medical Science,

University of Tokyo.

Localion/Qualifiers
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becomes pusculus semapherin Via mRNA.
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/clone_lib="NT2EM4"
/note="cloning vector: pUCl9FL3-mRNA from uninduced NT2
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                /organism-"Homo sapiens"
/mci_type-"genomic DNA"
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/db_xref-"G1:22766769"
/translation-"MSVYNSFKCSYDGVEDKRIMGMQLDRASSSLYVAFSTCVIKVPL
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                                                                                                                                                 GROERHGKOKKTOLASRDPYCGWIKEGGACSHISPNSRLTFFQDTERGNTOALGDCHN
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1. (bases 1 to 2306)
Ota/I.: Isoqai,Tr., Nisilkava/I.: Hayashi,K., Salto.K., Yamamoto.J.,
Ishli,S.: Siqiyamar,T., Wakamaiso.A., Ratai,K. and Olevi.T.
Primer for synthesizia tuli-length cDNA and use therror
Patent: UP 2602191363-A 14696 69-501L-2002;
                                                                                                                           /procein_d="BAE55136_1"
/db_xref="01:14042171"
/translation="msvynsekosydovedkrimomodorassslyvaFstovikvid
GROERHGKCKKTGIASRDPYCOWIKFOGAGSHISFNSHITFDODIESHYDAGGOGH
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Pred. No. 8.4e-42;
                             138. [1826]
Zhote-Tunnamed protein product?
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JF 2002191363-A/14696
09-JUL-2002
28-JUL-2000 JP 2000280990
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Submitted (10-MAY-2001) Takao Isogai, Helix Research Institute, Genomics laboratory: 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (5-mail:genom.cs/Hri.co.jp, Tel:81-84-38-52-3975, Fax:81-438-52-3986) MEDO human cDNA sequencing project supported by Ministry of Bocnomy. Trade and Industry of Japan, cDNA full insert sequencing: Research Association for Biotechnology; cDNA library construction, 5'-6 3'-end one pass sequencing and clone selection: Helix Research institute (supported by Japan Key Technology Center etc.) and Department of Virology, Institute of Medical Science, University of Tokyo.
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Mammalia; Butberia; Primates; Catarrhini; Hominidae; Homo.
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/cell_type="teratocarcinoma"
/clone_lib="MTZRP3"
/note="cloning vector: pME18SFL3-mRNA from NT2 neuronal
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| O; Mismatches C;
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/ordanism·"Homo sapiens"
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KEIICHI NAGAI,TETSUJI OTSUKI
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Mammalia: Butheria; Primates, Catarrhini; Hominidae: Hone.

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TOSHIO GTAJIAKAO ISOGALJTETSCO NISHIKAWA,KGJI HAYASHIJKAOKU
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Location/Qualifiers
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Submitted (10-MAY-2001) Takao Isogai, Helix Research Institute, Submitted (10-MAY-2001) Takao Isogai, Helix Research Institute, Genomics Laboratory 120-3 yana, Kisarazu, Chiba 292-0812, Japan (E-mall:genomics@hri.co.)p, 7e1:81-438-52-3975, Fax:81-438-52-3986) REDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan: CDNA tull insert sequencing: Research Association for Biotechnology: cDNA tull insert sequencing: Research Institute (supported by Japan Key Technology Center etc.) and Department of Virology, Institute of Medical Science, University of Toxyo.

Location/Gualiliers
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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Homo sapiens (human)
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/cell_type="teratocarcinoma"
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.(2181).
                                                                                    /organism:"Homo sapiens"
/mol_type="genomic DNA"
/db_xref:"Laxon:9606"
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/nol_type="mkNA"
/db_xref="taxon:9606"
/clone="NT2RM4002194"
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Jacobs.K., Mccoy.J.M., Lavallie,E.R., Collins-Racie,L.A., Evans,C., Merberg.D., Treacy.M., Bowman,M.R., Spaulding,V. and Agostino,M.J., Sorented proteins and polymocleotides encoding them Patent: WJ 0119988-A 160 22-MAR-2001; Genetics Institute, Inc. (US)
                                                                                                                                                                                                                                                                          DVITCRMKGREKDECHNEIKVLLKKNDDALFVGSTNAFNPSCRNYKMDTLEPFGDEFS
GMARCFYDAKHANVALFADGKLYSATVTDFLAIDAVIYRSLGESPTLRTVKHDSKWLK
                                                                                                                                           EPYFVÇAVDYSDYIYFFFREIAVBYNTMGKVVFPRVAGVCKNDMGGSORVLEKGWTSF
LKARENGSVRGDSHFYFNILQAVTDVIRINGRDVVLATFSTPYNSIPGSAVCAYDMLD
LASVYTGRFYRQKSPDSTWTPVPDERVPKPRPGCCAGSSSLRRYATSNEFPDDTLNFI
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                           /tradslation-"mrsealdlyptluhfagagFpedseplsishgnyfkyypvFvGH
KFGkNTTGRHRDLQMIMIMNGTLYIAARDHTYTVDIDTSHTEEIXCSKKLTWKSRQA
                                                                                                                                                                                                                            KTHPLMJEAVPSLENRPWFLRTMVRYRLFKIAVDTAAGPYQNHTVVFLGSEKGILLKF
I ARIGNSGFLNDSLFLEEMSVYNSEKCSYDGVEDKRIMGMQLDRASSSLYVAFSTCVI
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Best Local Similarity 100.0%; Pred. No. 8e-42;
Matches 216; Conservative 0; Mismatches 0
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/db_xref="taxon:9606"
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/ Ab_kref**Gt.i.i.d/S.223**
/ Araus lation** MADIASVEGREROKSPOSTWIFVPEBENUERPROCAGSSSL
BEYATSNEFPDJINFINTHFINDSAVPGREREOKSPOSTWIFVPEGREYETSNEFPDON
NIFTVYPEGSELSTAILKERATGNSGELMOSTE-LEMAYNBERGSPOSTBORDEN
NLFEDDJIEROKTOVIKVPEGREBHGKCKKICLASRDYCHKEGGACSFLEPNS
RLFEDDJIEROKTDGLODG-HNSFVALMOSSSLLESTITSDSJAQEGYSRQGGRIPMK
HLLDSPDSIDGAVSRHQDKKGYTRESTLKGHOQLVPYTLLATAVILAFWBAVF
SGITVYCVCHRREYDVARMLIKADGHLLLALATPESTFILGOFFREGGRIPMK
HLLDSPDSIDGAVSRHQDKKGYTRESTLABPTSSTFILGOFFREGGRIPMK
NLINAGTKDMPPROGREYETJTALFTPSSTFILGOFFREGGRIPM
NLINAGTKDMPPROGREYUTDLELASPSALIPSYVVLLITALATAVIDORYGGREYEND
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Human semaphorin 6a-1 (sema6a-a). a gene involved in neuronal
development and regemeration mechanisms during apoptosis, and its
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Mammalla, Eutheria, Primatos, Caparitin: Horinidae: Bome.
/clone_lib+"N12kmg"
/nofe="elening vector:_pUC19kL+ m8NA_from_unndired=NT-
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Patent: WO 6031252-A 1 62-JUN-2000)
KLOSTERMANN ANDREAS (DE) : MAX PLANCK GRSELLSCHAFT (DE) : BEHL
CHRISTIAN (DE)
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                                                            neuronal precursor cells.
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/protein_id+"RAB55158.1"
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/mol_type="genomic DNA"
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Best Local Similarity 100.
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PAT 02-APR-2001

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EPYPYQAVDYGDY IFFFREIAVEYNTMGKVVFPRVAQVCKNDMGGSORVLEKQWTSF
LKARLMCSVPGDSHFYFNILQAVIDVIRINGRDVLATFSTPYNSIPGSAVCAYBMLD
ZASYFTGRFKEDGKSPDRYATVPUDENVPRFRPGCCAGSSSLERYAISNEFDDTLNFI
TYHPLMDEAVPSIFNREWFLERMYRYRLIKIANDTAACPYQNHTVYFGSSEG IILKF
LARIGNSGFLNDSLFLEEMSVYNSEKCSYDGVEDRRIMGMQLDRASSSLYVAFSTCVI
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DCHNSFVALMGHSSSLLPSTTTSDSTAQEGYESRGGMLINWKHLLDSPDSTDPLGAVSS
HNHQDKKGVIRESYLKGHDQLVPVTLLAIAVILAFVMGAVFSGITVYCVCDHRRKDVA
                                    PAT 16-SEP-2000
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kpgrntygrhrldigmimngtlyfaardhiytvdidtshteeiygskltwksrga
dvdtcrwkgkhkdechnfikvllkknddalfycgtnafnpscrnykmdtlepfgdefs
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Mammalia; Eutneria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                   use as a polential drug target.
Patent: WO 0031252-A 6 02-cUN-2000;
KLOSTERMANN ANDREAS (DE) ; MAX PLANCK GESELLSCHAFT (DE) ; BEHL
                                                                                                                                                                                                               CAGGCCGTGACTGTCTCGAGGCAGCCCAGCCTGAACGCCTACAACTCACTGACAAGGTCG
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/note="unnamed protein product"
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/db_xref="G1:10187891"
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/mol_type="genomic DNA"
/db_xref-"taxon:9606"
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Sequence 6 from Patent W00031252.
AX026746
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Matches 216, Conservative
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Kodaira.H., Purnya.T., Takahashi,M., Kikkawa.E., Omira.Y., Abe.K.,
Kamihara,K., Katsuta.N., Sato,K., Tanikawa.M., Yamazaki,M.,
Sugiyama.T., Irie.R., Otsuki,T., Sato,H., Wakamatsu,A., Ishi,S.,
Kamamoto,J., Ishoo,Y., Kawal-Hio,Y., Sato,K., Wishikawa.T.,
Kimura,K., Yamashita.H., Matsuo,K., Nakamura.Y., Sekine.M.,
Kikuchi,H., Muzakawa.R., Kanehori,K., Takahashi-Fijil.A.,
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Nebo human cDNA sequencing project
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Sequence 6578, App Sequence 578, App Sequence 578, App Sequence 34, App 11 Sequence 14, App 11 Sequence 1, App 11 Sequence 1, App 11 Sequence 1, App 11 Sequence 22739, App Sequence 22739, App Sequence 209, App	Antibodies	mlarity 100.0%; Score 216; DB 9; Length 1472; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Coccccccccccacacacacacacacacacacacacacac
US-10-128-714-6578 US-10-128-714-578 US-10-128-714-578 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287A-34 US-10-187-287-39 US-10-184-642-209 US-10-173-694-209	ALIGNMENTS 19925299 Acids, Proteins and US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299 US/09/925,299	50.0%; Score 216; DB 90.0%; Pred. No. 5.1e-9 Vec. O. Mismatches O. Mismatches
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	SEGULI: US-09-925-299-60 Sequence 60, Application US/0 Sequence 60, Application US/0 CENERAL INFORMATION: TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: CURRENT FILMS DAIS: 2002-03-0 PRICK APPLICATION NUMBER: CURRENT FILMS DAIS: 2002-03-0 PRICK APPLICATION NUMBER: 60, PRICK APPLICATION NUMBER: 60, PRICK APPLICATION NUMBER: 60, PRICK APPLICATION NUMBER: 60, PRICK FILMS DATE: 2002-03-0 PRICK PILMS DATE: 1999-03-1 NUMBER CY SEC ID NOS: 1554, SCHWARR: PATOMEN: 1959-03-1 TYPE: DAR (VRGANISM: MASC_ICALING LOCATION: (130) CTHER INFORMATION: cquals NAME/KEY: masc_feature LOCATION: (130) CTHER INFORMATION: nequals UNDERTORMENT TROUGHTS NAME/KEY: masc_feature LOCATION: (130) CTHER INFORMATION: nequals	Cuery Match Best Local Simil Matches 216; C 1 CCGC 372 CCGC
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PRIOR FILING DATE: 1999-03-09
PRIOR APPLICATION NUMBER: 09/520,781
PRIOR FILING DATE: 2000-03-08
NUMBER OF SEQ ID NOS: 81
SOFTWARE: PALENTIN VEY: 2.1
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                    Matches 216; Conservative
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NAME/KEY: misc_feature
LOCATION: (2882)
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LOCATION: (214)..(2865)
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LOCATION: (2882)
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ORGANISM: Homo sapiens
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Sest Local Similarity
                                                                                                                     LENGTH: 3333
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                                          121 GGGCTGAAGGGTACGGCCCCCGCTAAAGCCGGAACGTACCCCGCAAAGCATCGTTTGGTCGC 180
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                                                               432 CAGGGCGTGACTGTCTGGAGGCAGCCCAGCCTCAACGACTACAACTCACTGACAAGGTCG 491
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TITLE OF INVENTION: UNCELL UNCYEL OF INVENTIONS WEST.
TITLE OF INVENTION: WEST.
AND ROUNDABOUT-LIKE FOLYFEPTIDES
FILE REFERENCE: 15966-540 CON 8-16
CORRENT APPLICATION MABRE: US/09/991,353
CURRENT FILING DATE: 2005-23
PRIOR APPLICATION NUMBER: USSN 66/123,667
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**TILLE OF INVENTION: Nacleic Acids, Proteins and Antibodies

**FILE REPERENCE: PANO**

CURRENT PAPLICATION NUMBER: US_09/925,299

CURRENT PILING DATE: 2001-28-10

**PRIOR APPLICATION NUMBER: PC1/USC/C5683

PRIOR APPLICATION NUMBER: PC1/USC/C5683

PRIOR FILING DATE: 2006-03-03

PRIOR FILING DATE: 1999-03-12

NUMBER CF SEQ ID NOS: US56

SOTWARR: Patchtin Ver. 2.0

SEQ ID NO 660-
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US-09-925-299-60
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Publication No. US20030040617A9
GENERAL INFORMATION:
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Matches 216; Conservative
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ORGANISM: Homo sapiens
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LOCATION: (129)
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US-09-925-299-60
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US-09-991-053-5
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PUBLICATION NO. US26030545147
PUBLICATE SHUMKELS. Richard A.
APPLICANT: SLAWKELS. Richard A.
APPLICANT: LaRochelle, William
FILE OF UNDENTION NOVEL POLYNUCLEOTIDES AND PROTEINS ENCODED THEREBY
FILE PERURENCE: 15566-540 CIP
CURRENT APPLICATION NUMBER: US/09/957.187
CURRENT APPLICATION NUMBER: 60/123.667
PRIOR PILING DATE: 1090-03-09
PRIOR PILING DATE: 1090-03-09
PRIOR PILING DATE: 2000-09-10
PRIOR APPLICATION NUMBER: 60/234,082
PRIOR APPLICATION NUMBER: 60/234,082
PRIOR APPLICATION NUMBER: 60/234,788
PRIOR PILING DATE: 2000-09-10
PRIOR FILING DATE: 2000-09-19
PRIOR FILING DATE: 2000-09-19
PRIOR FILING DATE: 2000-09-19
PRIOR FILING DATE: 2000-01-04
NUMBER: 60/233,748
PRIOR FILING DATE: 2000-01-04
NUMBER: 60/233,798
PRIOR FILING DATE: 2000-01-04
NUMBER: 60/233,798
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LOCATION: (2882)
- OTHER INFORMATION: an n may be any one of a or t or 9 or 018-93-991-053-5
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160.03; Pred. No. 5.5e-58;
tive 0; Mismatches 0;
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Sequence 3, Application US/09957187
Publication No. US20530054514A1
GENERAL INFORMATION:
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Best Local Similarity 106.0
Matches 216; Conservative
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SEQ ID NO 3
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ORGANISM: Homo sapiens
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Best Local Similarity 100.0%: Prod. No. 5.5er58;
Matches 216: Conservative 0; Mismatches 0: Todale o
Query Match 100.0%; Score 216; EB-11; Length 3330; Best Local Similarity 100.0%; Pred; No. 5.56-58; Matches 216; Conservative 0; Mismatches 0; Indels 0
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LOCATION: (214)..(3630)
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LOCATION: (3047)
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ORGANISM: Homo sapiens
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AFPLICANT: Shinkets, Richard A.

AFPLICANT: LAROCHELLE, William
IIITE CF INVENTION: NOVELED FORNUCLEDIDES AND PROTEINS ENCODED THEREBY
IIITE REFERENCE: 15866-540 CIP
CURRENT PELING DATE: 2000-69-19
PRIOR APPLICATION NUMBER: US/09/957,187
CURRENT FILING DATE: 2000-69-19
PRIOR FILING DATE: 2000-69-19
PRIOR APPLICATION NUMBER: 60,234,082
PRIOR APPLICATION NUMBER: 60,234,082
PRIOR PELING DATE: 2000-09-20
PRIOR APPLICATION NUMBER: 60,234,082
PRIOR FILING DATE: 2000-09-20
PRIOR APPLICATION NUMBER: 60,233,798
PRIOR APPLICATION NUMBER: 60,233,798
PRIOR APPLICATION NUMBER: 60,234,083
PRIOR APPLICATION NUMBER: 60,214,485
PRIOR APPLICATION NUMBER: 60,174,485
PRIOR PRIING DATE: 2000-09-104
NUMBER OF SEQ ID NOS: 85
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SEQUENCE 84. Application US/09957187
FOREIGN NO. 1920030054514A1
SEREFAL INFORMATION:
APPLICANT: CAROCHELLO, WILLIAM
FILTE OF INVENTION: NOVEL POLYNUCLEOTIDES AND PROTEINS ENCODED THEREBY
FILE PEFERENCE: 15966-540 C1P
CURRENT APPLICATION NUMBER: US/09/957,187
CURRENT FILING DATE: 1000-09-19
PRIOR FILING DATE: 1099-30-09
PRIOR PLILING DATE: 1099-30-09
PRIOR PLILING DATE: 1090-03-03
PRIOR PLILING DATE: 2000-03-03
PRIOR APPLICATION NUMBER: 60/226,781
PRIOR PLILING DATE: 2000-03-03
PRIOR PLILING DATE: 2000-03-03
PRIOR FILING DATE: 2000-03-03
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NAME/KEY: misc_feature

LOCATION: (3047)

CTHER INFORMATION: an n may be any one of a or t or g or US-09-957-187-3
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100.0%; Pred. No. 5.5e-58;
ive 0; Mismatches 0;
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US 09-764-891-6943
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Publication No. US2036073623A1
GENERAL INFORMATION
APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES
TITLE OF INVENTION: PROM VARIOUS CDNA ::HPARIES
FILE REPERENCE: 20412-756
CURRENT APPLICATION NUMBER: US/C9/918,995
CURRENT APPLICATION NUMBER: US/C9/235,076
PRIOR FILING DATE: 2061-07-30
PRIOR FILING DATE: 3895-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FESTERO for Windows Version 3.0
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Pred, No. 5.7e-58:
0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
77.8%; Score 168; DB :1;
Best Local Similarity 99.4%; Pred; No. 4.7e-43;
Matches 168; Conservative 0; Mismatches 1;
PRICE APPLICATION NUMBER: 60/233,798
PRIOR ETLING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 60/174,485
PRIOR FILING DATE: 2000-01-04
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PATENTIN VOT: 2.1
SEQ ID NO 84
: LENGTH: 4250
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OTHER INFORMATION: n - A.T.C or G
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Best Local Similarity 100.0%
Matches 216; Conservative
                                                                                                                                                                                ; NAME/KEY: CDS
; LOCATION: (250)..(3390)
US-09-957-187-64
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LENGIH: 460
                                                                                                                                   TYPE: DNA
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5521 TCTGGAGAGAGAGCAGCTACAGCAGTAATGGCACTCTTCCTAGGACGGGGACTAAAGAGGA 5580
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25.5%; Score 55; DB 11; Length 6773; 64.6%; Pred. No. 1.4e-07; ive 6; Mismatches 45; Indels 6
                                                                                                                                              Sequence 6944, Application US/09764891
Publication No. US2003007780841
GENERAL INVORMATION:
APPLICANT: Rosen et al.
TITLE CF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC006
CURRENT FILING DATE: 2001-61-17
Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ 1D NOS: 10231
SOFTWARE: Patentin Ver. 2.0
SEQ 1D NO 6944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 6767;
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NUMBER OF SEQ ID NOS: 1023;
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Segrence 6943, Application US/09764891
PUBLICATION NO. US20C30077808A1
GENERAL INFORMATION
TILL FOR INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REPRENCE: PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 20C1-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 55; DB 11;
Pred. No. 1.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
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Hest Local Similarity 64:57
Marches 82: Conservative
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Matches 82, Conservative
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ORGANISM: Homo sapiens
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US-69:764-891-6944
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TYPE: DNA
ORGANISM: Aequorea victoria
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Rest Local Similarity 55.99
Matches 71, Conservative
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Matches 57: Conservative
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US-09-554-000-7
                                                                                                                                                                                                                                                                                                                                    153 GGIAGGG 159
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                     US 10-027-632-166826
ORGANISM: Human
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US-09-554-000-7/c
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SEQUENCE 156826, Application US/10027632
SEQUENCE 186826, Application and Mappins of Sisqle Nuclectide TITLE OF INVENTION: Polymorphisms in the Human Senome FILE REPERCE: 108627.129
CURRENT APPLICATION NUMBER: US/10/027.632
CURRENT FILMS DATE: 2002-64-30
FRIOR APPLICATION NUMBER: US 60/218,506
FRIOR APPLICATION NUMBER: US 60/218,606
FRIOR APPLICATION NUMBER: US 60/193.43
FRIOR APPLICATION NUMBER: US 60/193.43
FRIOR APPLICATION NUMBER: US 60/193.43
FRIOR FILMS DATE: 2000-03-29
FRIOR FILMS DATE: 2000-03-29
FRIOR FILMS DATE: 1909-11-23
FRIOR APPLICATION NUMBER: US 60/16,368
FRIOR APPLICATION NUMBER: US 60/16,368
FRIOR FILMS DATE: 1999-09-28
FRIOR APPLICATION NUMBER: US 60/16,368
FRIOR FILMS DATE: 1999-09-28
FRIOR FILMS DATE: 1999-08-09
NUMBER OF SED 1D NOS: 325720
SOFTWARE FELING DATE: 1999-08-09
SOFTWARE: FEALENG FOR Mindows Version 4.0
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                                                                                                                   Sequence 310. Application JS/:3764691
Publication No. US2003067780841
GENERAL INFORMATION:
APPLICANT: Rosen et al.
ITILE OF INVENTION: Nucleic Acids, Proteins, and Antinodies FILE REFERENCE: PC006
CURRENT FILING DATE: 2601-91-17
Prior application data removed - consult PALM of file wrapper NUMBER OF SEQ ID NOS: 1023;
SEQ ID NOS: 1023;
SEQ ID NO 8:0
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US-09-764-891-810
                5547 TCAGACC 5653
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LOCATION: (321)
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LENGTH: 765
TYPE: DNA
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APPLICANT: Jiang, Ho
APPLICANT: Jiang, Ho
APPLICANT: Ho, Wengi
APPLICANT: Tiskeff, Daniel
APPLICANT: Zamudio, Carlos
APPLICANT: Lemieux, Sabastieu M
APPLICANT: Lemieux, Sabastieu M
APPLICANT: Lemieux, Sabastieu M
APPLICANT: Lemieux, Gabastieu M
APPLICANT: Lemieux, Sabastieu M
APPLICANT
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            Length 765;
17.3%: Score 37.4; DB 13; Length 55.9%; Pred. No. 0.036; Live 6; Mismatches 56; Indels
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Patent No. US2C020165364A1

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TYPLE OF INVENTION: FUGNESCENT PROTEIN SENSORS FOR TITLE OF INVENTION: DETECTION OF ANALYTES
FILE REFERENCE: 07257/042001
CURRENT APPLICATION NUMBER: US/U9/554,000
CURRENT FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: 08/918.252
PRIOR APPLICATION NUMBER: 08/918.252
PRIOR FILING DATE: 1977-03-14
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FASISEQ for Windows Version 4.0
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61.3%; Pred. No. 0.17;
ive 0; Mismatches 36;
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APPLICANT: Inship Daniel
APPLICANT: Adminion Carlos
APPLICANT: Ecohkin, Alexey M
APPLICANT: Ecohkin, Alexey M
APPLICANT: Adminion of Essential Genes in Aspergillus incleaturs and
TITLE OF INVENTION: Methods of Ose
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 16.3%; Score 35.2; 58 14; Best Local Similarity 55.8%; Pred. No. 0.18; Matches 67; Conservative 0; Mismatches 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REPERENCE: 10:82-0:8-59
CURRENT APPLICATION NUMBER: U$/10/128,714
CURRENT APPLICATION NUMBER: U$/10/285,697
PRIOR PILING DATE: 2002-04-23
PRIOR FILING DATE: 2001-04-23
PRIOR FILING DATE: 2001-04-27
PRIOR FILING DATE: 2001-04-27
PRIOR FILING DATE: 2001-04-27
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-08-31
NUMBER OF SED ID NOS: 8603
SED ID NO 7578
PRIOR PILLING DATE: 2002-01-23
PRIOR FLIANG DATE: 2001-04-23
PRIOR FLIANG DATE: 2001-04-27
PRIOR PLING DATE: 2001-04-27
PRIOR APPLICATION NUMBER: US 60/287,065
PRIOR PELICATION NUMBER: US 60/295,890
PRIOR FLIANG DATE: 2001-06-65
PRIOR FLIANG DATE: 2001-06-65
PRIOR PLICATION NUMBER: US 60/303,899
PRIOR FILING DATE: 2001-06-65
PRIOR FILING DATE: 2001-07-09
PRIOR FILING DATE: 2001-07-09
PRIOR FILING DATE: 2001-08-31
NUMBER OF SEO ID NOS: 8603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-128-714-7578
Sequence 7578, Application US/10128714
Publication No. US/20380119013A1.
GENERAL INFORMATION:
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US-10-128-714-7578
                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Aspergillus fumigatus
US-10-128-714-2578
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SEQ ID NO 2578
LENGTH: 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Jiang, Bo
APPLICANT: Bu, Wendi
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Best Local S:
Matches 67,
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146 AGCCGGAGGTACCCCCCCAAACCATGCTTGCTCCCTTTGCACATCCATGAAGCCCAATG 205
                                  212 CGCCCACCTACCAGCAAAACCATCCACCTCCACCTCCACCTGCACTG 271
                                                                                                                                                                Search completed: September 30, 2003, 22:20:07 Job time : 63.2004 secs
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SenCore version 8.1 Copyright (c) 1993 - 2003 Computer Ita.
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mode1 ws buist OM protein - protein search, September 30, 2003, 16:32:18 ; Search time 445 Seconds (without alignments) 24.481 Million cell updates/sec Kun on:

US-09-856-681-4 Perfect score:

376 1 PPPADQRVDSTQVFSSQPSS......PPKESFAPGSTSMXPNCAC: 72 BLOSUM62 Gapop 10.0 / Sapext 0.5 Scoring table: Sequence:

566894 seqs, 151307093 residues Searched: Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 1868 Maximum Match 1868 Listing first 45 summaries

Database

Published_Applications_AA:*

/cgn2_6/ptcdata/2/pubpa/USI3C_FJHCOKR.pop:*/cgn2_6/ptcdata/2/pubpa/USI3C_NEW_PUB.pop:*/cgn2_6/ptcdata/2/pubpa/USE3_NEW_PUB.pop:* /cqn2_6/ptcdata/2/pubbaa/US6C_FUBCOMB.pep:*

SUMMARLES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the Lotal score distribution.

	008.37 i P. 100		equence 85, Appl	equence 3. App.:	Secuence 29, Apr.	equence 8, April	eguence 36. Apr.	equence 21. Appl	equence 18, April	equence 20, Appl	Seguence 34248. A	equence 423, Arp	equence 300, App	Sequence 425, App	equence 425, App	Sequence 425, App	
	Des		S	x	cr.	10	v.	. თ	, v	·S	Sc	S	S	· ss	S	S	Se S
	ar		US-09-957-187-85	US-09-843-245-3	US-10-239-431A-20	US-10-239-431A-8	US-10-213-990-36	US-10-303-693-21	US-09-291-417-18	US-10-303-683-20	US-09-864-761-34248	05-10-177-293-424	US-10-259-165-300	US-09-738-973-425	US-69-854-133-425	US-10-144-649A-425	US-09-864-761-33417
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Sequence 1116, Ap Sequence 2, Appli Sequence 152, App Sequence 22, Appl Sequence 294, Appl	Sequence 11, Appl Sequence 1531, Ap Sequence 12, Appl Sequence 4, Appli Sequence 2, Appli	Sequence 5, Appli Sequence 1, Appli Sequence 6, Appli Sequence 218, Appli Sequence 1068, Appli	Sequence 1068, Ap Sequence 1068, Ap Sequence 2, Appli Sequence 24, Appl Sequence 170, Appl Sequence 44230, A	Sequence 527, App Sequence 77, Appl Sequence 166, App Sequence 140, App Sequence 38306, A Sequence 80, Appl Sequence 3831, A
	.5 US0-145-396-11 [U US-09-925-300-1631 [I US-09-934-455-122 [S US-10-218-957-2		10 05-09-833-253-1068 14 05-10-025-380-1068 14 05-10-078-547-2 14 05-10-078-547-2 14 05-10-062-254-170 9 US-09-864-761-44230	-925-302 -263-82 -062-25 -062-25 -062-25 -062-25 -029-18 -029-18
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ALIGNMENTS

Publication No. US200300545187
Fublication No. US20030054514A1
GENERAL INFORMATION:
APPLICANT: Shimkels, Richard A.
APPLICANT: Shimkels, Milliam
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES AND PROTFINS ENCODED THEREBY
CCRRENT APPLICATION NUMBER: US60-99-7,187
CCRRENT APPLICATION NUMBER: US709-957,187
CCRRENT APPLICATION NUMBER: US709-957,187
CCRRENT APPLICATION NUMBER: US709-957,187
CCRRENT APPLICATION NUMBER: US709-957,187
PRICR PILING DATE: 1999-03-09
PRICR PILING DATE: 2000-09-03
PRICR PILING DATE: 2000-09-09
PRICR FILING DATE: 2000-09-19
PRICR FILING DATE: 2000-09-19
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PRICR FILING DATE: 2000-09-19
PRICR FILING DATE: 2000-09-19
PRICR FILING DATE: 2000-09-19
PRICR FILING DATE: 2000-09-19 Gaps 0 Length 1047; Indels 100.0%: Score 376; DB 11; 160.0%: Pred. No. 1.9e-29; tive 0; Mismatches 0; Gaery Match Best Local Similarity 165.(Matches 72; Conservative : ORGANISM: Homo sapiens US:09-957:187-85 RESULT 1 US-09-957-187-85 PRT

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APPLICANT: FRADELIZE JULIE
APPLICANT: FRIEDERICH, EVELNE
APPLICANT: GOLSTERN ROY M.
APPLICANT: GOLSTERN ROY M.
APPLICANT: GOLSTERN ROY M.
APPLICANT: GOLSTERN ROY M.
APPLICANT: GOLSTERN ROY M.
APPLICANT: MOIRFAUX. VINCENT
APPLICANT: NOIRFAUX. VINCENT
APPLICANT: SOURCES CONTINE
TITLE OF INVENTION: PEPTINE SECUENCES COMPRISING ONE OR MCRE JULIS BINDING
TITLE OF INVENTION: TO PROTEINS OF THE Ena/VASP FAMILY, AND THEIR USES
TITLE SPEERANCE: C506-1032
CORRENT APPLICATION NUMBER: US/20/239,431A
FRIDE APPLICATION NUMBER: PR/20/239,431A
FRIDE APPLICATION NUMBER: PR/20/239,431A
FRIDE APPLICATION NUMBER: FR/20/23837
FRIDE APPLICATION NUMBER: FR/20/23837
FRIDE APPLICATION NUMBER: FR/20/23837
FRIDE APPLICATION NUMBER: FR/20/23837
FRIDE APPLICATION NUMBER: PR/20/23838
SOFTWARE: PALENTING DATE: Z0/20/23837
FRIDE APPLICANT: NOW ST/20/23837
FRIDE APPLICANT: NOW ST/20/23838
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                                                                                                                                                                                                                                                                                                                                                                                                Sequence 8, Application US/16239431A Publication No. US20030170726A1 GENERAL INFORMATION:
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Best Local Similarity
Matches 22: Conservat
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US-10-213-990-36
                                                                                                                                              259 VAPKFTP 265
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Best Local Similarity
Matches 19, Conserv
                                                         61 LSTSMKP 67
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APPLICANT: GO.STEYN RCY K.
APPLICANT: GO.STEYN RCY K.
APPLICANT: GO.STEYN BOYEL
APPLICANT: GO.STEYN BOYEL
APPLICANT: MOTREAUX. VINEEL
TITLE OF INVENTION: DEPTIDE SEQUENCES COMPRISTING ONE OR MORE UNITS HINDING
ITTLE OF INVENTION: TO PROTEINS OF THE ENA/VASP FAMILY, AND THEIR USES
FILE REFERENCE: G509-1032
CURRENT FILING DATE: 2002-69-23
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: PCT/FR01/00843
PRIOR APPLICATION NUMBER: PR 00/03637
PRIOR FILING DATE: 2000-03-22
NUMBER FO SEQ ID NOS: 38
SOFTWARE PARENTLY OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF SECOND OF S
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                                                                                                                                                                                                                                                                                                                                                                           CURRENT INFORMATION:

APPLICANT: MCPHORSON, PETER S.

APPLICANT: RAMJAUN, ANCHORSON, PETER S.

APPLICANT: RAMJAUN, ANCHORSON BETHER ACTIVITY BY MODULATION OF THE TITLE OF INVENTION: INTERACTION BETWEEN THE ENDOCYTIC PROTRIN ENDOPHILIN TITLE OF INVENTION: AND THE GERMINAL CENTER KINASE-LIKE KINASE

CURRENT PETER REPERENCE: 9555.116G501

CURRENT APPLICATION NUMBER: US/09/843,245

CURRENT FILING DATE: 201-04-25

NUMBER OF SED ID NOS: 13

SOFTWARE: PATERITO VET. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db 10: Length 873:
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34.7%; Prod. No. 2;
Uivo 6; Mismatches
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Sequence 20, Application US/10139431A
Publication No. US20030170726A1
GENERAL INFORMATION:
APPLICANT: FRADELIZE, JULIE
                                                                                                                                                                                                                                                                                            Sequence 3, Application US/09843245
Patent No. US20020164672A1
                                    1636 LSTSMKPNDACT 1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 34.77
Matches 25, Conservative
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Matches 22; Conservative
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ORGANISM: Murine sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Rattus sp
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APPLICANT: Choi, Wensherd

TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL.

TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY

FILLE REFERENCE: AGOOLGG-X-1

CURRENT FILLION DATE: 2001-05-23

PRICE RAPPLICATION NUMBER: US 60/180.312

PRICE APPLICATION NUMBER: US 60/180.312

PRICE RELING DATE: 2000-02-04

PRICE RELING DATE: 2000-05-26

PRICE FILLING DATE: 2000-05-26

PRICE FILLING DATE: 2000-06-37

PRICE FILLING DATE: 2000-06-37

PRICE FILLING DATE: 2000-06-37

PRICE FILLING DATE: 2000-06-37

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PRICE FILLING DATE: 2000-06-37

PRICE FILING DATE: 2000-06-37

PRICE FILING DATE: 2000-06-37

PRICE FILING DATE: 2001-06-37

                              Sequence 20. Application US/10303683

PARTICANT: Exelixis, 160.
PAPLICANT: Exelixis, 160.
PARTICANT: Exelixis, 160.
PARTIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/USC1/00669
PRIOR FILTING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/USC1/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/USC1/00668
PILING DATE: 2001-01-30
FILING DATE: 2001-03-30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PTGING DATE: 2001-61-30
APPLICATION NUMBER: PCT/US01/00662
FILING DATE: 2001-61-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: PCT/US01/60664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 34248, Application US/09864761; Patent No. US20C20048763A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
08-10-303-683-20
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US-10-303-63-21

Squence 21, Application US/10:0:633

Publication No. US20:331378241

SAFERAL INFORMATION:

APPLICANT: EXCHAIS, Inc.

TITLE OF INVERTION: MAPARS AS MODIFIERS OF BRANCHING MORPHOGENESIS AND METHOLS OF TITLE OF INVERTION NUMBER: US/10/503,583

CURRENT APPLICATION NUMBER: US/10/503,583

CURRENT FILING DATE: 2002-11-25

PRIOR RILING DATE: 2003-11-25

NUMBER OF SEQ ID NOS: 22

NUMBER OF SEQ ID NOS: 22

SOFTWARE: Patentin Version 3.1
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                                           6 QRVDSIQVHSSQPSGQAVTVSKQPSLNAYNSL--TRSGLKRTPSL 48
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PUDLication No. US2033055031
GENERAL INFORMATION: GREGORY
APPLICANT: PLOWAN, GREGORY
APPLICANT: MAKTINEZ, RICARDO
APPLICANT: MAKTINEZ, RICARDO
APPLICANT: MAYTE, BAVID
APPLICANT: WHYTE, BAVID
FILE REFERENCE: 240/300
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Pred. No. 32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 32.8%; Promatches 21; Conservative 6;
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Best Local Similarity 32.89
Matches 21: Conservative
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US-09-291-417-18
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APPLICANT: Googer, Bret.
APPLICANT: Cooper, Bret.
APPLICANT: Cooper, Bret.
APPLICANT: Cooper, Bret.
APPLICANT: Golf, Stephen A.
APPLICANT: Ratagiri, Fimiyaki
APPLICANT: Katagiri, Fimiyaki
APPLICANT: Katagiri, Fimiyaki
APPLICANT: Katagiri, Fimiyaki
APPLICANT: Katagiri, Fimiyaki
APPLICANT: Ricke, Darrell
APPLICANT: Bloke, Darrell
APPLICANT: Bloke, Darrell
TILLE OF INVENTION: GENES THAT ARE MODULATED BY POSTIPANSCRIPTIONAL GENE SILENCI:
FILE REFERENCE: 70330-NP
CURRENT APPLICATION NUMBER: US 60/370,620
PRIOR APPLICATION NUMBER: US 60/370,620
PRIOR APPLICATION NUMBER: US 60/386,327
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR APPLICATION NUMBER: US 60/325,277
PRIOR FILING DATE: 2001-09-26
NUMBER OF SEO ID NOS: 782
SOFTWARE: Patentilist.pl version 3.0.4 (C) 2001 Syngenta
LENGTH: 200
munch: Day
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2378 PEAPQEEKUSEKPIRTPPPGSCTSDLSKIPS-TENSSQEISVEERTPTKASVPPDLPPPPQ 2436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 3664;
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: LoCATION: (15)..(15)
: OTHER INNORMATION: Xaa ~ any naturally occuring amino acid
US-10-259-165-300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cuery Match
19.5%; Score 73.5; DB 15;
Best Local Similarity 37.5%; Pred. No. 1.8e+02;
Matches 24; Conservative 9; Mismatches 26;
PRICR APPLICATION NUMBER: US 60/299,887
PRICR FILING DATE: 2501-06-21
PRICR PPLING DATE: 2501-06-27
PRICR PILING DATE: 2501-06-27
PRICR PILING DATE: 2001-06-27
PRICR FILING DATE: 2001-07-18
PRICR PLING DATE: 2001-07-18
PRICR FILING DATE: 2002-03-05
PRICR FILING DATE: 2002-03-05
PRICR FILING DATE: 2002-03-05
PRICR FILING DATE: 2002-03-05
PRICR FILING DATE: 2002-05-14
NUMBER OF SEQ ID NOS: 506
SEC ID NO 423
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: Publication No. US20030135888A1
: GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Oryza sativa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2437 PAPV 2440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58 FAPL 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-10-259-165-300
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APPLICANT: Mails, Funda
APPLICANT: Mills, Gordon B.
TITLE OF INVENTION: COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT,
FILE REFERENCE: MRI-038
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NN: EXPRESSED IN BONE MARROW, SIGNAL = 10
NN: EXPRESSED IN FETAL LIVER, SIGNAL = 0.9
NN: EXPRESSED IN ADULT LIVER, SIGNAL = 4.8
NN: EXPRESSED IN ADULT LIVER, SIGNAL = 1.4
NN: EXPRESSED IN HEART, SIGNAL = 7.2
NN: EXPRESSED IN HEART, SIGNAL = 9.5
NN: EXPRESSED IN HELA, SIGNAL = 9.5
NN: EXPRESSED IN HELA, SIGNAL = 9.5
NN: EXPRESSED IN HELA, SIGNAL = 9.3
NN: EXPRESSED IN HELA, SIGNAL = 9.3
NN: EXPRESSED IN HELA, SIGNAL = 9.3
NN: EXPRESSED IN HELA, SIGNAL = 9.3
NN: EXPRESSED IN HELA, SIGNAL = 1.7
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NN: EXPRESSED IN HELA, SIGNAL = 1.7
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NN: EXPRESSED IN HERA, SIGNAL = 1.7
NN: EXPRESSED I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Annomax Sequence Listing Engine vers. 1.1 SEQ ID NO 34248
LENGTH: 2665
                                          PRIOR PLILNG DATE: 2007-101-30
PRIOR APPLICATION NUMBER: PCT/USG1/00670
PRIOR PELLING DATE: 2007-01-36
PRIOR APPLICATION NUMBER: US 60/234.667
PRIOR FILING DATE: 2000-09-22
PRIOR PLING DATE: 2000-09-30
PRIOR PLING DATE: 2000-09-30
PRIOR PLILNG DATE: 2000-09-30
PRIOR PILING DATE: 2001-01-29
NUMBER OF SE0 15 NOS: 49117
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                  PRIOR APPLICATION NUMBER: PCT/US01/00661
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APPLICANT: Glatt, Karen
APPLICANT: Zhao, Xumei
APPLICANT: Gannavarpu, Manjula
APPLICANT: Gannavarpu, Manjula
APPLICANT: Mertens, Shubhangi
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Bast Jr., Robert C.
Hortobagyi, Gabriel
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Hoersch, Scbastian
Monahan, John
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Best Local Similarity 37.59
Matches 24; Conservative
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Wang, Youzhen
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ORGANISM: Homo sapiens
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US-10-177-293-423
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5; Gaps

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Publication No. 0820630116599A1
GENERAL INFORMATION:
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Best Cordi Similarity 12.00.
Thosa 27, Conservative
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US-10-144-649A-425
                                                                               ORSANISM: Homo sapiens
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US-09-864-761-33417
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US-10-144-649A-425
                                                                                                                   US-09-854 133-425
   LENGIH: 4019
TYPE: PRI
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TYPE: PRT
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                                                                                                                                                                                           129 PAVQSAVQSQOISAISSPFAETSTCSRPAAPRVYRKTRARACHRSRSPAITPSTPPAAFFS 188
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                                                                                                               2 PPAPQRVDSIQVES-SQPSGQAVTVSPQPSLNAYNSLTRSSLK--RTPSLKPDVPP-KPS
                                           Sabs
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Sequence 425, Application US/0984133
Publication No. US2002018349541
Publication No. US2002018349541
APPLICANT: Lodes, Michael J.
APPLICANT: Mohamath, Raudoh
APPLICANT: Benson, Robert A.
APPLICANT: Secrist, Heather
TITLE OF INVENTION: COMPOSITIONS AND METHORS FOR TITLE OF INVENTION: THE THEATHER AND DIAGNOSES OF 10NG CANCER FILE REFERENCE: 210121.475010
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APPLICANT: Malos, Michael D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: THE THERAPY AND DIAGNOSIS OF LUNG CANCER
FILE REFERENCE: 210121, 475C9
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                                           33; Indels
Best Local Similarity 30.4%; Pred, No. 7.3;
Matches 21; Conservative 11; Mismatches
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SOFIWARE: FastSEG for Windows Version 3.0
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CURRENT FILING DATE: 2001-05-11
NUMBER OF SEQ ID NOS: 735
SCFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: 05/09/738,973
CURRENT FILING DATE: 2009-12-14
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Patent No. US20C20110563A_
GENERAL INFORMATION:
APPLICANT: Reed, Sleven G.
APPLICANT: Henderson, Robert A.
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Secrist. Heather
Indirtaes, Carol Yoseph
Benson, Darin R.
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Henderson, Robert A.
Lodes, Michael J.
Fling, Steven P.
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US-09-854-133-425
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APPLICANT:
APPLICANT:
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GENERAL INFORMATION:
APPLICANT: Rein, Sharron G.
APPLICANT: Rein, Sharron G.
APPLICANT: Rein, Barid K.
APPLICANT: Chen, Wenshong
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: HUMAN GENOME-X-13
CURRENT APPLICATION NUMBER: US 60/180,312
PRICE APPLICATION NUMBER: US 60/180,312
PRICE APPLICATION NUMBER: US 60/180,312
PRICE APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         310 PPPARSKIPI_CSLSQAQTSQPSPQVFSPGSSNSRPPSPNDPYAKMV--GTPRPPPVGH 967
                                                                                                                                        1 PPPAPPCRV---DSI-OVHSSOPSGGAV----TVSRCPS-LNAYNSLIRSGLKRIP---- 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 PPPAPQRV---DS1-QVHSSQPSGQAV----IVSRQPS-LNAYNSLTRSGLKRTP----
                                                                          Gaps
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                                                                       œ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
APPLICANT: Rail lough Applicant APPLICANT: Rail lough APPLICANT: Algate, Paul A. APPLICANT: Algate, Paul A. APPLICANT: Moneil), Patricia D. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ITTLE OF INVENTION: THE THERAPY AND DIAGNOSIS OF LONG CANCER TITLE OF INVENTION: THE THERAPY AND DIAGNOSIS OF LONG CANCER CURRENT APPLICATION NUMBER: US/10/144,649A CURRENT FILING DATE: 2002-06-21 NUMBER OF SEQ ID NOS: 749
SEQ ID NO 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4019;
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19.4%; Score 73; DB 15; Length 401;
Best Local Similarity 32.5%; Pred. No. 2.3e+02;
Matches 27; Conservative 11; Mismatches 27; Indels
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PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     958 SESRENSAAPVENCTPLSSVSRP 990
                                                                                                                                                                                                                                                                                                                                   968 SPSERNSAAPVENCTPISSVSRP 990
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; Patent No. US20020048763A1
                                                                                                                                                                                                                                                                      SIKPINDPKPSFAPIISTSMKP 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47 -- SLKEDVPPKPSFAPLSTSMKP 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 425. Application US/10144649A
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PRIOR FILING DATE: 2000-08-03

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Query Match 19.3%; Score 71.5; DB 9; Length 223; Best Local Similarity 35.3%; Pred. No. 12; Matches 24; Conservative 3; Mismatches 23; Indels 15; Gaps
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OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL - 13
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL - 41
OTHER INFORMATION: EXPRESSED IN PRAIN, SIGNAL - 25
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL - 25
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL - 26
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US-09-864-761-33417
PRIOR APPLICATION UNMBER: GB 24263.6
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR APPLICATION NUMBER: GB 226.359
PRIOR FILING DATE: 2000-10-04
PRIOR PELING DATE: 2000-0-27
PRIOR PLING DATE: 2001-0-36
PRIOR PLING DATE: 2001-0-36
PRIOR PLING DATE: 2001-0-36
PRIOR PLING DATE: 2001-0-36
PRIOR PILING DATE: 2001-0-36
PRIOR APPLICATION NUMBER: DE 2001-0-36
PRIOR APPLICATION NUMBER: US 99/F608:538
PRIOR APPLICATION NUMBER: US 99/F608:538
PRIOR PILING DATE: 2000-69-22
PRIOR APPLICATION NUMBER: US 99/F608:538
PRIOR PILING DATE: 2000-69-22
PRIOR APPLICATION NUMBER: US 99/F608:538
PRIOR PILING DATE: 2000-69-22
PRIOR APPLICATION NUMBER: US 99/F608:538
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TYPE: PKI
ORGANISM: Homo sapiens
FEATURE:
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125 IPIQSKP 131 61 LSTSMKP 67 g ŝ

q

Search completed: September 30, 2003, 16:43:58 Job time : 449 secs

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Gendore version 5.1.6
Copyright (c) 1993 - 2003 Compuser Ltd.
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Tepow ws Suisn protein - protein search, September 30, 2003, 15:16:08 : Search time 72 Seconds (without alignments) [56:727 Million evil quant-zero Run on:

US-09-856-681-4

score Title: Perfect :

1 PPPAPORVOSIQVHSSOPSG. Sednence:

17

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BLOSUM62 Gapop 10.0 / Supext 0.5 Scoring table:

Total number of hits satisfying choses parameters:

1107663 seqs, 158726573 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2090000000

Post-processing: Minimum Match 0% Maximum Match 190% Listing first 45 summaries

Database

A_Geneseq_19JunJ3:*

| SIDSI/gcgdata/geneseqy-embl/Aai980.LAT:
| SIDSI/gcgdata/geneseqy-embl/AAi980.LAT:
| SIDSI/gcgdata/geneseqy-embl/AAi980.LAT:
| SIDSI/gcgdata/geneseqy-embl/AAi980.DAT:
| SIDSI/gcgdata/geneseqy-embl/AAi984.DAT:
| SIDSI/gcgdata/geneseqy-embl/AAi984.DAT:
| SIDSI/gcgdata/geneseqy-embl/AAi984.DAT:
| SIDSI/gcgdata/geneseqy-embl/AAi986.DAT:
| SIDSI/gcgdata/geneseqy-embl/AAi980.DAT:
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| SIDSI/gcdata/geneseqy-embl/AAi980.DAT:
| SIDSI/gcdatageneseqy-embl/AAi980.DAT:
| SIDSI/gcdatageneseqy-embl/AAI98 /SIDS1/gcadata/genesog/genesogp.cmb//AA1997.DAT;*/SIDS1/gcgdata/genesog/genesogp.emb//AA1999.DAT;*/SIDS1/gcgdata/genesogy-genesogp.emb//AA1999.DAT;* /SIDS:/gcqdata/geneseg/genesegp.cmb:/AA2001.DA1:*/SIDS:/gcqdata/geneseg/genesegp.emb:/AA2002.DA1:* /SIDS1/gcgdata/geneseq/geneseqp.emb1/AA2002.DA1:*/SIDS1/gcgdata/qeneseq/geneseqp.emb1/AA2003.DAT:* /SIDSI/gcgdata/geneseq/geneseyp-cmbi/AA2600.DAT:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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	pescription	Hinding domain of	profe	od Abe	profei	protei	pro e	Cucan	Sporet	
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	3000	376	376	376	376	376	376	376	376	376
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ALIGNMENTS

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Binding domain of human semaphorin 6A-1
      A
      AAY71461 standard; peptide; 72
                   (first entry)
                   04-007-2000
            AAY71461;
RESULT 1
   AAY71461
```

Human: semaphorin 6A-1; (HSA)SEMA6A-1; neuronal development; apoptosis; neuronal regeneration; ana/VASP protein family; imminomodulatory; dene therapy; diagnostic agent; therapeutic agent; differentiation; cytoskeletai stabilisation; plasticity.

Homo sapiens

51..56 /note- "Specific binding motif for members of Ena/VASP protein family, especially Evl" Location/Qualifiers 51..56 Binding-site Key

WO200031252-A1

99WC-EP09215. 26-NOV-1999; 02-JUN-2000

98EP-0122441. 26-NOV-1998; (PLAC) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN.

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Clain
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                                                                                                                                                                                                                                                                                       The present sequence is a binding domain of transmembranchs human semaphorin 6A-1 ((BAS,SPAK6A-1) which is involved in neuronal development and regeneration mechanisms during apoptosis. The binding domain shows homology to 2 year protein and selectively binds to members of Ena/VASP protein family, especially EVI. (BAS,SEWA6A-1 is a member of protein family) displaying secreted or transmembranchanchanch explusive guidance cues critically involved in neuronal development. Expression of (HSA)SEWA6A-1 is highest in embryonic brain and taken and moderate in lung. The present sequence is useful as disquestic and therapeutic agents, for modulating the immune system, in gene therapy, for effecting differentiation, cytoskeletal stabilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPPAPQRVDSIQVHSSQPSGQAVTVSKQPSLNAYNSLTRSGLKRIPSLKRDVPPKFSFAR 60
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                                                                                                                       Nucleic acid coding for human semaphorin 6A-1 used as diagnostic agent, therapeutic agent, for modulating immune system, in gone therapy or for effecting differentiation, cytoskeletal stabilization and/or plasticity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; primer; detection; diagnosis; antisense therapy; gene therapy,
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Otsuki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 376; DB 21;
100.0%; Pred. No. 7.4e-35;
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, Sugiyama I, Wakamatsu A, Nagal K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human protein sequence SEQ ID NO:11073.
                                                                                                                                                                                                                                                 Disclosure: Page 22; 53pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB92688 standard; Protein: 507
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99JP-0300253.
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02-MAY-2000; 2000JP-0183767.
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Nes 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSISMKPNDACT 72
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Klostermann A;
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                                                 WPI; 2000-400065/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72 AA;
                                                                           N-PSDB; AAD01234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and plasticity.
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full-longth cDNAs defined in the serior synchology 300.7

full-longth cDNAs defined in the specification, where a primer set comprises: (a) an oligo-di primer and an oligonucleotide complementary strand of a polynucleotide which comprises one of the 5602 nucleotide sequences detined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprising a sequence complementary to the complementary strand of a polynucleotide which comprises a 5-end sequence and an oligonucleotide comprises 3'-end sequence complementary to a complementary strand of a polynucleotide which comprises a 5'-end sequence (c) complementary to a complementary strand of a polynucleotide which comprises a 3'-end sequence which comprises a 1'-end sequence/3'-end sequence is selected from those defined in the 5'-end sequence/3'-end sequence is selected from those defined in the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are also useful for the particularly full-length cDNAs. The primers are also useful for the detection and/or diagnosis of the abnormality of the proteins encoded by the tull-length cDNAs. The primers are also well for AAH13628 and AAH136310 without any specialised methods. AAH03166 to AAH13629 to AAH3610 in the exemplification in represent human cDNA sequences; AAB92483 represent human cond sequences; AAB92480 to AAH33632
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Filmer sets for synthesizing polynuclectides, particularly the 5602 full-length conas defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
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Wakamatsu A., Sugiyuma T., Nagai K., Kojima S., Otsuki T., Koga H.;
                                                                                                                                                                                                                                                                                                                                                                              present invention describes primer sets for synthesising 5602
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                                                                                                                                                                                                                                                                            8; SEQ ID 11073; 2537pp + CD ROM; English.
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21-JAN-2000; 2600JP-6128774.
02-MAY-2600; 2000JP-0183765.
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69-JUN-2000;
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                                                                                                                                                                              The invention relates to primers for synthesising fall length conditions. B3C cDNA molecules encoding a human protein lave been solutionabelide sequences of 5' and 3' ends of the cDNA molecules have been determined. Primers for synthesising the full cought cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the olique applier method. The primers enable the production of the full length cDNA begins to present sequence is a polypeptide without any special methods. The present sequence is a polypeptide by a full length human cDNA of the forming.

Note: The sequence data for this parent MAL dot form grath of printing specification, but was obtained in CD-NOM format directly from MPC.
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                                                                                   tor synthesizing full length cLNA clones and their
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 376; DB 22; Length 562; 100.0%; Pred. No. 9.4e-34;
                                                                                                                                           Claim 8; SEQ ID NO 3088; 1360pp + sequence listing: English.
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Sugiyamo I. Wakamatsu A. Nagai K.
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2000JP-0118776.
2000JP-0183767.
                                                                                                           in genetic manipulation
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09-JUN-2006; 20003P-0241899
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                 2001-524255/58
                                                                                830 Primers useful
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es 72; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                             562 AA;
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                                       N-PSDB; AAK94365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-AUG-1999;
11-JAN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB94104;
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Best Local 9
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comprises: (a) an object these specification. Where a primer set comprises: (a) an object primer and an objecnic where a primer set comprises: (a) an object primer and an objecnic comprises one of the S602 nucleotide sequences defined in the specification, where the object comprises at least 15 nucleotides; or (b) a combination of an objective comprises at least 15 nucleotides; or (b) a combination of an objective comprises at least 15 nucleotides; or (b) a combination of an objective comprises a 5-end sequence complementary to the complementary strand of a polynucleotide which comprises a 5-end sequence complementary to a polynucleotide which comprises a 5-end sequence complementary to a polynucleotide which comprises a 5-end sequence of sequence objective and an objective and 10 primers a 1-end sequence, where the objective which comprises a 1-end sequence, where the objective which sequence of 10 primers a 1-end sequence, where the objective and 11 primers are sets and be used in anti-sense therapy and in gene therapy. The primers are also useful for the description and/or dispiners are useful for synchesising polynucleotides. The primers also well also to AAH13628 and AAH13631 to AAH13631 copresent human amino objective and AAH13632 to AAH13632 to prepresent human amino objective and in the exemplification of the process of the absent objective and in the exemplification of the process of the absence of an objective and in the exemplification of the process of the absence of the process of the absence of the process of the absence of the process of the absence of the exemplification of the process of the absence of the process of the absence of the process of the absence of the exemplification of the process of the absence of the process of the absence of the process of the absence of the process of the absence of the process of the absence of the process of the absence of the process of the absence of the absence of the absence of the absence of the absence of the absence of the absence of the absence of t
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                                                                                             The present invention describes primer sets for synthesising 5602
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22;
Claim 8; SEQ ID 14328; 2537pp + CD ROM: English.
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100.0%; Pred. No. 9.4e-34;
iive C; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hayashi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human protein sequence SEQ ID NO:17568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sugiyama T, Wakamatsu A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB95317 standard; Protein; 574 AA.
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11-JAN-2000; 2060JP-0118776.
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Best Local Similarity 180.0
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RESULT 7
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                                                                                                                                                                                                                                       The present invention describes primer sets for synthesising 5622 full-length cDNAs defined in the specification. Where a primer set comprises: (a) an ollyo-dT primer and an oilgonucleotide complementary to the complementary strand of a polynucleotide which comprises one oilgonucleotide comprises at least 15 naciootides; or (b) a combination of an oilgonucleotide comprises at least 15 naciootides; or (b) a combination of an oilgonucleotide comprises a sequence complementary to the complementary strand of a polynucleotide which comprises a 5'-end sequence and an oilgonucleotide comprises a 3'-end sequence. Oilgonucleotide which comprises a 1'-end sequence of the comprises at least 15 nucleotides and the combination of the specification. The primer sets can be used in antisense therapy and in gene therapy. The primer sets can be used in antisense therapy and in gene therapy. The primer sets can be used in antisense therapy and in gene therapy. The primers are useful for synthesising polynucleotides, particularly full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers allow obtaining of the full-length cDNAs are present thuman cDNAs and Sequences; AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628 and AMB13628
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                                              Primer sets for synthesizing polynucleotides, particularly the 9502 full-length cDNAs defined in the specification, and for the depention and/or diagnosis of the abnormality of the proteins encoded by the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 376; LB 22; Length 574; 160.0%; Pred. No. 9.76-34; tive 6; Mismatches 6; Indels 0;
                                                                                                                                                                                           Claim 8; SEQ ID 17568; 2537pp + CD ROM: English.
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2000Jp-0118776.
2000JP-0193767.
2000JP-0241899.
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Matches 72; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the present invention.
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WPI: 2001-318749/34.
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                                                                                                                                      full-length cDNAs
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11-JAN-2000;
02-MAY-2000;
09-JUN-2000;
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The present invention describes primer sets for synthosising 5602 (111-length cDNAs defined in the specification. Where a primer set comprises: (a) an oligo-dr primer and an oligonucleotide complementary strand of a polynucleotide which comprises one of the 5602 nucleotide comprises at least 15 nucleotides, on where the oligonucleotide comprises a factor of an oligonucleotide comprises a sequence complementary to the comprise and no oligonucleotide which comprises a 5'-end sequence and an oligonucleotide comprises a sequence complementary to the comprises at least 15 nucleotides where the oligonucleotide which comprises a 1'-end sequence, where the oligonucleotide which comprises a 1'-end sequence, where the oligonucleotide which comprises as 1'-end sequence, where the oligonucleotide which comprises as 1'-end sequence, where the oligonucleotide which comprises as 1'-end sequence, where the opening the 5'-end sequence 15 selected from those defined in the specification. The primers are useful for synthesising polynucleotides, particularly full:length collars of the primers are also useful for the proteins encoded by the collar and the complementary of the primers are also useful for the proteins encoded by the collar and the collars of the primers are also useful for the collars encoded by the collar and the second and the primers are also useful for the AMH3828 and AMH3833 represent human amino acid sequences; and AMH3829 to AMH3832 represent cliqonucleotides, all of which are used in the exemptification
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                                                                                                                                                                                                                                                                   Primer sets for synthesizing polynucleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                               Yamamoto J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
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                                                                               Saito K, Ya
Otsuki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 376; DB 22;
100.0%; Pred. No. 1.2e-33;
Eve. 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 8; SEQ ID 17154; 2537pp + CD ROM; English.
                                                                   lsogai I., Nishikawa T., Hayashi K., S.
Sugiyama I., Wakamatsu A., Nagai K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel human diagnostic protein #4057
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.081
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
Hest Local Similarity 100.0
These 72, Conservative
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(HELIT) HELIX RES INST.
                                                                                                                                                                                       WPI: 2001-318749/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           699 AA;
                                                                                                                                                                                                                                                                                                                                                                                   rull-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200175067-A2
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                                                                           Ota T. Is
Ishii S,
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Homo sapiens.
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                                          17-DEC-1997;
                                                                    16-DEC-1997;
                                                                                                                                                     Agostino MC.
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                 25-JUN-1998
                                                                                               3-JAN-1997
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                                                                                                                                                                   Racie LA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE90731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to isolated polynochecide (i) and propertie (ii) sequences. (i) is useful as hybridisation probes, polypertie (ii) sequences. (i) is useful as hybridisation probes. Objective and for chromosome and gene mapping, and in recombinant production of (II). The polynochecides are also used in diagnostics as explessed sequence lags for for dentifying expressed genes. (i) is useful in query techniques for restore normal activity of (II) or to treat disease states involving to restore normal activity of (II) or to treat disease states involving a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (i) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynuclectide sequences have applications in diagnostics, forensics, gene mapping, identification of matations.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLTRSCLKRTPSLKPDVPPKPSFAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Note: The sequence data for this patent did no, appear in the printed specification, but was obtained in electronic format directly from WIPC at Itp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Secreted protein; human letal brain; nutrition; cytokine; stimulant; cell proliferation; differentiation; immune system; suppressor; ligand: regulator; hematopolesis; tissue growth; activin; inhibin; hammostalic; chemotaxis; chemokinetic; thrombosis; receptor; cadherin; thront:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel tuman diagnostic amino acid sequences of the invention.
                                                                                                                                   New isolated polynucleotide and encoded polypophides, useful in diagnostics, forcesics, quee mapping, identification of mutations responsible for genetic disorders or other trains and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 100.0%; Score 376; DB 22; Length 863; Local Similarity 100.0%; Pred. No. 1.60-33; es 72; Conservative 0; Mismatches 0; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human secreted protein from clone CJ145_1.
                                                                                                                                                                                                     Claim 20: SEQ ID No 34425; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW64221 standard, Protein, 974 AA
                                                                    Tang VII
31-MAR-2000; 200005-0540217.
23-AUG-2000; 200008-0649167.
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852 ESTSMKPNDACT 863
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                                                                    Drmanac RT, Liu C,
                                                                                             WPI; 2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anti-inflammatory.
                                         (HYSE-) HYSEQ INC
                                                                                                           N-PSDB; AAS68253
                                                                                                                                                                             biodiversity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPSINAYNSLTRSGLKRTPSLKPDVPPKPSPAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human: secreted protein; nutrient; cytokine modulator; proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               differentiation: immune system modulator: tissue growth; chemotactic;
haemostatic; thrombolytic; anti-inflammatory; tumour inhibition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         adult testes, human adult brain and human adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polynucleotides and secreted proteins - obtained from human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
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                                                                                                                                                                                                                                                          7. Jacobs K, Lavailie ER, McCoy JM, Merberg D:
Spaulding V, Treacy M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CJ145_1 protein sequence SEO ID 161.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 17j: Page 71-74; 110pp: English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB90731 standard; Protein; 975 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         foetal brain, human adult test
saliyary gland cDNA libraries
97W0-0823330.
                                                                970S-0991872.
                                                                                                                             970S-0783401.
                                                                                                  9608-0769192
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                                                                                                                                                                                                (GEMY ) GENETICS : NST INC
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Matches 72, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSTSMKPNDACT 72
                                                                                                                                                                                                                                                                                                                                                            WPI; 1998-362774/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               974 AA;
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WO260031252-Al
                           02-20N-2000
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  Human cDNA clones represented in AAF98374 - AAF98489 encode secreted proteins AAB90657 - AAB90750. The cDNA clones are isolated from various tissue types, and may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate protein expression. The polypeptides and nucleic acids may be used as cutricorts or to modulate cytokine and cell proliferation/differentiation activity and may also be broteins, their agonists and/or antagonists exhibit, haematopoics; requiating activity itsue qrowth activity activity activity chemicalactic/chomokinetic activity hadmissiatic and thrombolytic activity, and this activity, activity; receptor/lique activity, and in chibit activity, and manalogosis activity cadherin/tumour suppressor activity and and or tumour inhibition activity. Inclinded in the insention are probes
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                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPPAPORVDSIÇVHSSQPSGQAVTVSRQPSLMAYNSLIRSGLKRIPSLKPDVPPKPSFAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; semaphorin 6A-1; (HSA)SFMA6A-1; neuronal development; apoptosis; neuronal regeneration; Ena/VASP protein family; immunomodulatory; gene therapy; diagnostic agent; therapeutic agent; differentiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note- "Zyxin-like domain that selectively binds to
members of Ena/VASP protein family, especially Evl"
957..961
                                                                                                Isolated nucleic acids encoding polypeptides, useful for nodulating e.g. cytokine and cell proliferation/differentiation activity, the
                                                                                                                                                                                                                                                                                                                                                                                                                        ;
;
                        Collins Racie LA, Evans C:
Spaulding V, Acostino MJ:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note- 'Specific binding motif for members of Eng/MSP protein family, especially Evl' 1009.1014 (inche- "Specific binding motif for members of Eng/WSP protein family, especially Evl'
                                                                                                                                                                                                                                                                                                                                                                                               Length 975,
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                            e.g. cytokine and celi proliferation/differentiation
immune system and hematopolesis regulating activity
                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 376; DB 22;
100.0%; Pred: No. 1.90-33;
ive G; Mismatches 0;
                                                                                                                                               Disclosure: Page 487-490; 557pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cytoskeletal stabilisation; plasticity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY71460 standard; Protein; 1630 AA.
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                        LaVallie ER,
                                       BOWINS MR.
                                                                                                                                                                                                                                                                                                                                               encoding the secreted proteins
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                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 106.
Matches 72, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 LSTSMKPNDACT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human semaphorin 6A-1.
(GEMY ) GENETICS INST
                                    Treacy M.
                          MCCOV JM,
                                                             WPI; 2001-244801/25.
                                                                                                                                                                                                                                                                                                                                                                         975 AA;
                                                                         N-PSDB; AAF98469.
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                                    Merberg D,
                          Jacobs K,
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The present sequence is a transmembranous human semaphorin 6A-1 ((RSA)SEMASA-1) which is involved in neuronal development and progeneration mechanisms during apoptosis. Semaphorin is a family of protects displaying secreted or transmembrane-based repulsive guidance cues critically involved in neuronal development. The present sequence was isolated from human 1-ZAP Express CDNA library which was screened using a PCR fragment amplified from human neuroblastoma cell line SX-N-MC CDNA. The (HSA)SEMASA-1 protein contains a Zyxin-like domain that selectively binds to members of Ena/VASP protein family especially kidney and moderate is lung. The present sequence is useful as adaquostic and therapeutic agents, for modulating the immune system, in qene therapy, for effecting dillerentiation, cytoskeletal stabilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPPAPQRVDSIQVHSSQPSQQAVIVSRQPSENAYNSEJTRSGIKRTPSIKEDVPPKPSRAP 60
| HTH: HTH: FHTH: FTHELLIHH: HTHITELHIH: HTHITELHIH: HTHITELHIH: F
959 PPPAPQRVDSIQVHSSQPSQGAVIVSRQPSENAYNSJTRSGLKRTPSIKPDVPPKPSFAP 1018
                                                                                                                                                                                                                                                                                                                                                                                                      therapeutic agent, for modulating immune system, in gene therapy of for effecting differentiation, cytoskeletal stabilization and/or plasticity
                                                                                                                                                                                                                                                                                                                                                                     Nucleic acid coding for human semaphorin 6A-1 used as diagnostic agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; primer; detection; diagnosis; antisense therapy; gene therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                (PLAC ) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Huma: protein sequence SEQ ID NO:14623.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 29-33; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB94239 standard; Protein; 451 AA
99WD-EP09215.
                                                                98EP-0122441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99JP-0248036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1019 LSTSMKPNDACT 1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-JUN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100,
nes 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 LSTSMKPNDACT 72
                                                                                                                                                                                                    Klostermann A;
                                                                                                                                                                                                                                                                 WPI; 2000-400065/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1030 AA;
                                                                                                                                                                                                                                                                                                         N-PSDB; AAD01233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and plasticity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUL-1999;
26-NOV-1999;
                                                                26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP1074517-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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Best Local s
                                                                                                                                                                                                    Behl C,
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MDDI, human; disease detection and treatment molecule polypeptide;
07-FEB-2001
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the specification. The primer sets can be used in antisense therapy and in gene therapy. The primers are usoful for synthesising polynolecides. Particularly full-length convas. The primers are also usoful for the detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNas. The primers allow obtaining of the full-length cDNas assity without any specialised methods. AAH03166 to AAH1328 and AAH13633 to AAH1342 and AAH13633 represent human cDNa sequences; AAB3446 to AAH13528 represent oligonucleotides, all of which are used in the exemplification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes primer sets in synthesising 5602 full-ength cDNAs defined in the specification. Where a primer set comprises: (a) an oliquent mind an oliquent of a primer set comprises: (b) an oliquent of a polyucicotide which comprises one of the 5602 nucleotide sequences defined in the specification, where the oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprises at least 15 nucleotides; or (b) a combination of an oligonucleotide comprises a sequence complementary to the polynucleotide which comprises a 1'end sequence, where the polynucleotide which comprises a 3'end sequence, where the oligonucleotide comprises at 3'end sequence, where the object of the comprises at 1 and sequence, where the combination of the 5'end sequence is selected from those defined in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPFAPORVDSIOVHSSOPSGOAVIVSROPSLNAYNSL1-----RSGLKRIPSLKPDVPP
                                                                                                                                                      Primer sets for synthesizing polynupleotides, particularly the 5602 full-length cDNAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human: primer; detection: diagnosis; antisense therapy; gene therapy.
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                                                                                         Yamaporo J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                        Satto K, Y. Otsuki Ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 163.5; DB 22;
Pred, No. 5.9e-16;
...**rhes 15;
                                                                                                                                                                                                                       Claim 8: SEG ID 14623; 2537pp + CD ROM; English
                                                                                                       Nage: K.
                                                                                        Hayashi K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human protein sequence SEQ ID NO:14749.
                                                                                                       Wakamatsu A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB94296 standard: Protein; 464 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43.58;
                                                                                            Nistikawa
            2000JP-0118776.
2000JP-0183767.
 99JP-0500253
                                       09-JUN-2000; 2000JP-0241899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPSEVPQTPSVRP 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55 KPSFAPLSTSMKP 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                  (HELI-) HELIX RES INST.
                                                                                                      Sugiyama T.
                                                                                                                              WPI: 2001-318749/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
les 37; Conserv
                                                                                                                                                                                                Full-length CONAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    451 AA;
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 27-AUG-1999;
11-JAN-2000;
                           02-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUN-2001
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                                                                                                       Ishii S,
                                                                                         Ota T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB94296
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1 PPPAPGRVDSTQVHSSQPSGQAVTVSRQPSLNAYNSLT:----RSGLKRTPSLKPDVPP
                                                                                                                                                                                                          Primer sets for synthesizing polynuclectides, particularly the 5602 full-length coMAs defined in the specification, and for the detection and/or diagnosis of the abnormality of the proteins encoded by the
                                                                                                                                         Yamamoto J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                        Saito K, Y. Otsuki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43.5%; Score 163.5; DB 22; 50.7%; Pred. No. 6.1e-10; tive 8; Mismatches 15;
                                                                                                                                                                                                                                                                                Claim 6; SEQ ID 14749; 2537pp + CD ROM; English.
                                                                                                                                        Hayashi K, S
A, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABU11724 standard, Protein: 474 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human MDDI pelypeptide SEQ ID 671.
                                                                                                                                        sogai T. Nishikawa T.
Suqiyama T. Wakamatsu
                                      993P-0300253.
2000JP-0118776.
2000JP-0183767.
2000JR-0241899.
                            99JP-0248036.
28-JUL-2000; 2000EP-0116126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446 KPSEVECTPSVRP 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55 KPSFAPLSTSMKP 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of the present invention
                                                                                                           (HELLI-) MELLIX RES INST
                                                                                                                                                                                 WPI: 2001-318749/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
tes 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464 AA:
                                                                                                                                         Sogai T.
                                                                                                                                                                                                                                                     full-length cDNAs
                          29-301-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-PEB-2003
                                          27 - AUG - 1999:
11 - JAN - 2000;
                                                                    32-MAY-2000;
                                                                                    CO CON-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sedneuse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABU11724:
                                                                                                                                        Ota T, Is
Ishii S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
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456 KPSFVPOTPSVRP 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                            AAG7941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This invention describes a novel disease detection and treatment maternion ostoopptide (MDDI) which has anti-inflammatory, immunosuppressive, ostoopptide cytostatic, anti-inflammatory, immunosuppressive, cationaemic, antipsociatic and insociatic actionity. The polymerication of an insociatic and insociatic and insociatic and insociatic antipsociatic and insociatic and insociation of the polymerication. The polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the polymerication of the protection of the protection of the polymerication of the polymerication of the polymerication of the polymerication of the invention of the 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPPAPQRVDSIQVHSSQPS3QAVTVSRQPSLNAYNSLT-----RSCLKRTPSLKPDVPP 54
anti-inflammatory, immunosuppressive, osteopathic, cytostatic, anti-HIV: haemostatic, nephrotropic, antianaemic, antipsoriatic, heparotropic, gene thorapy, protein replacement, therapy, etc., proliferative disorder, cancer, adenocarcinoma, laphoma, relacoma, myeloma, sancoma, anaemia, Crohn's disease, acquired immunodeficiency syndrome, Aliss Goodpasture's syndrome, inflammation, osteoporosis, thrombocylopaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New purified disease detection and treatment molecule proteins and polynucleotides, useful for diagnosing, treating or preventing cancers (e.g. leukemia or sarcoma), anemia, Crohe's disease, AIDS, esteoporesis or hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jones AL. Trac AE., Dahl CR., Gletron D., Chion J., Sillman JL., Yu JY., Tasson C., Yap PE., Amstey SK: Sc., Dam TC., Liu TE. Neguyon DA., Kleetfeld Y., Gerstin EH., H. David MH., Lewis SA., Chen AC., Proper SR., Harris B.: Marwaha R., Lo A., Lan RY, Orasiku ME.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 27: SEO ID NO 671: 335pp · Sequence Listing: English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 163.5; DB 2
Pred, No. 6.3e-10;
8; Mismatches 15
                                                                                                                                                                                                                                                                                                                                                                                    2001US-280067P,
2001US-280067P,
2001US-280568F,
2001US-291280P,
2001US-291829P,
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2001US-300001P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                            27-MAR-2002; 2002WC-US09944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001CS-291849P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001US-299428P
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Matches 37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KPSFAPLSTSMKP
                                                                                                                                                     psoriasis; hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-058431/05.
N-PSDB; ABX34714.
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                                                                                                                                                                                                                                           WG200279449-A2
                                                                                                                                                                                                                                                                                                                                                                                    28-MAR-2001; 29-MAR-2001; 29-MAR-2001; 216-MAY-2001; 217-MAY-2001; 217-MAY-2001; 20-JUN-2001; 20-JUN-2001; 20-JUN-2001; 2
                                                                                                                                                                                                   Homo sapiens
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                                                                                                                                                                                                                                                                                              10-0CT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GE,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Daugherty
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Human; cell adhesion protein; CADHP; AIDS; Alzheimer's disease; acquired immunodeficiency syndrome; thymic dysplasia; epilepsy; rena: tubuiar acidosis; congenital glaucoma; cancer; atherosclerosis;
                                                                                                                                                                                                                                                                                             /label - Transmembrane_domain
/note= "identified by TMAP, N-termina! domain is
    cytoplasmic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                label. Semaphoirs_protein_precursor_receptor
focter "identified by BLAST-PRODOM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tabe: Semaphoirn_protein_precursor_receptor
note= "ldentified by BLAST-PRODOM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   //abbi- Semapholrn_proteim_precursor_receptor
/hote- "ldentified by BLAST-PRODOM"
266
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note- "Potentially phosphorylated" 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Fotentially phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Potentially phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        //noter "Potentially phosphorylated"
210
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                                                                                                                                                                                                                                                                                                                                                                         /note= "Potentially phosphorylated"
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                                                                                                                                                                                                                                                                                                                                                "noter "Potentially phosphorylated"
                                                                                                                                                                                                                                                                                                                                                                                                         9..477
Jabel- Semaphorin_domain
Note* "Identified by HMMER-PFAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "Potentially glycosylated"
                                                                                                                                                                                                                                                        label = Semaphorin_domain
hote= "identified by BLASI-DOMO"
                                                                                                                                                                                                                                                                                                                                                                                                'note" "Potentially glycosylated"
                                                                                                                                                                                                                  /label= Signal_peptide
/note= "Identified by HMMER"
AAG79413 standard; Protein; 1017 AA.
                                                                                                                                                                                           Location/Qualifiers
                                                                           CADHP-2, Incyte ID No: 7596315CD1.
                                                  (first entry)
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                                                                                                                                          Parkinson's disease
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                                         Domain
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The sequences given in AAGT412-21 are movel human cell adhesion proteins (CADHP). The CADHP polypeptides and polynucleotides are useful in treating diagnosing and preventing diseases or conditions associated with the decreased expression or overexpression of CADHP, e.g. immune system (acquired immunodeficiency syndrome, thymic dyspiasia), neurogetical (Alzaeiner's Aisease, Parkinson's disease, epilepsy), developmental (renal tubular acidosis, congenital glaucoma) and cell proliferative (cancer, atherosclerosis) disorders. They are also useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of CADHP. The CADHP or its fragments are useful in screening compounds for effectiveness as agonist or antagonist of the polypeptides, or in altering the expression of the target polypuncleotide and compounds that specifically bind to or modulate the activity of the polypoptide. This protein shows homology to modulate the value.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 PPPAPQRVDS:QVHSSQPSGQAVTVSRQPSLNAYNSLT-----RSGLKRTPSLKPDVPP 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dyslipidaemia; cúb; sushi; myelin; vor willebrand factor; kielin;
semaphorin; serine/threonine protein kinase; TSF-beta bindisq;
mas prote-encogene; ribonuclease pancreatic precursor; aminotransterase;
tolicid-like 2; cysteine sulfinic acid decarboxylase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Parkinson's disease; Huntington's disease; meurological disorder; schizophirenia; manic deprossion; mental retardation, angina pectoris; cardiovascular disease; acute heart failure; myocardial infarction; muscular disease; muscular disorder; retinal disease; photoreception; deafness; keratinisation disorder; retinal disease; photoreception; immunological alsorder; inflammatory disease; immuno disease; diabetes; bacterial infection; fungal infection; protozoal infection; obesity; viral infection; reproductive system disorder; metabolic disturbance; anorexia; wasting disorder; chronic disease; infectious disease; anorexia; wasting disorder; chronic disease; anorexia; metabolic disturbance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Buman; NCVX; neurodegenerative disease; Alzheimer's disease; anxiety;
                                                                                                                                                                  New Luman cell adhesion proteins (CADHP) useful for treating, diagnosing and preventing diseases or conditions associated with the speciant CADHP expression org. cancer, acquired immunodeficiency syndrome, Alzheimer's disease and epilepsy.
BM, Xu Y, Lee EA, Lec S, Lu DAM, Warren BA, Yue n KJ, Honchell CD, Burford N, Baughn MR, Tang TY, n JL, Gandhi AR, Kallick DA, Bandman O, Graul RC, Ramkumar J, Yao MG, Lal PG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43.5%; Score 163.5; DB 23;
50.7%; Pred. No. 1.6e-09;
tive 9; Mismatches 15;
                                                                                                                                                                                                                                                                               Claim 1: Page 115-17: 149pp; English.
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N-PSDB; ARA00055.
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                        Gietzen KJ,
Hillman JL,
    Duggan BM,
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/note= "identified by BLAST-PRODGM"
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22-DEC-2000, 2000US-259664P.
05-JAN-2001, 2001GS-260161P.
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Home sapiens

(INCY -) INCYTE GENOMICS INC

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Gaps

13;

Indels

Length 1017;

Job time : 74 secs

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The present invention relates to new NOVX polypoptides. The polypoptides. On polynoclectides and antibodies are useful in the manufacture of a medicament for treating or preventing neutrodecementary diseases (e.g. disease, Parkinson's disease, or Huntington's diseases (e.g. disease, Parkinson's disease, or Huntington's diseases (e.g. antiety, schizophronia, manic depression or mental retardation), cardiovascular disease, or Huntington's depression or mental retardation), cardiovascular disease, or Huntington's manic depression or mental retardation), cardiovascular diseases (e.g. acoute hour traition, andina pectoris or myocardial infartion), mascrilar diseases and described issued including those involving postoroscoption, dealiness and kezatinisation diseaders, cancer (e.g. ovariar, cancer or melanoma), immunological disearders, inflammatory and immune diseases. Dacterial, fungal, protocool and viral infections, and reproductive system discretes that medical at the Novy Mostel or Experient forms that have derivered or excessive production of Novy protein or protein forms that have derived or excessive obscitut activity compared to Novy Mostel or protein forms that have deriveded or excessive obscity. Metabolic disturbances associated with chronic dispasses and various cancers. Commonwest of the invantion may be used to cald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       identifying an individual from minute biological samples (Lissue typing). and in forensic identification of a biological sample. The present amino acid sequence represents a NOVX protein of the invention.
                                                                                                                                                                                                                                                                                                                                                        P, Anderson DW, Burgess CE, Boling FL, Casman SJ;
Edinger SR, Ellerman K, Gerlach V, Gorman L, Grosse KM;
Trann JL, Kekuda R, Lepieg DM, J. L, MacDougall JR;
Pena CEA, Peyman JA, Rastelli L, Rieger SA, Shinkets RA,
Spytek RA, Stone DJ, Tehernev VT, Vermet CAM, Voss E2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New NOVX polypeptides and polynucleotides usoful for treating or
preventing e.g. nourodogenerative diseases, neurological disorders,
cardiovascular diseases, muscular diseases and disorders, or
immunological diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequences of the invention may be used in chromosome mapping.
                                                                                                                                                                                                                                                                                                                                                                               colman SD, Edinger SR, Ellorman K
Guo X, Herrmann JL, Kekuda R. Lei
Millet I, Pena CEA, Peyman JA, R
Smithson G, Spyrrek KA, Stone DJ,
Zerhusen BD, Zhong H, Zhong M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 55; 299pp; English.
                                                                                                                                                        200005-255648P,
200105-291037P,
200105-297173P,
200105-309258P,
200105-315639P,
                                                                                         10-DEC-2001; 2001WO-US;8369.
                                                                                                                                     2000CS-254329P
                                                                                                                                                                                                                                                                        2001US-326393P
                                                                                                                                                                                                                                                                                                                     (CURA-) CURAGEN CORP
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W0200264791-A2.
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08-JUN-2001;
29-AUG-2001;
01-OCT-2001;
                                                                                                                                   08-DEC-2000;
14-DEC-2000;
15-MAY-2001;
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                                              22-AUG-2002
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Search completed: September 30, 2003, 16:32:09

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Genfore version 5.1.6
Capyright (c) 1993 - 2003 Compuges Ltd.
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using sw model protein search, protein ĕ September 30, 2003, 16:22:28 : Search time 44 Seconds (Withhour alignments) [NCL967 Million cell updates/sea Run on:

Title: Perfect score:

US-09-856-681-4 376 I PPPAPORVOSIQVHSSQPSG......FPKPSFARFISTSKKFNIACT Sequence:

114 114

BLOSGM62 Gapop 10.0 / Sapext 0.5 Scoring table:

96168682 residues 283308 segs, Searched:

28 1308 Total number of hits satisfying chosen parameters:

Minimum DB seq Maximum DB seq

length: 0 length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

pir2:* PIR_76:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARTES

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69.5	59.5	59	5.8 5.	58.5	. 89										٤

ALIGNMENTS

factogenital dysplasia-associated protein FGD1 - human

Cisperies: Romo sapiens (min)
Cibare: 10-Feb.1995 #sequence_rovision 10-Feb.1995 #text_change 17-Mar-1999
Cisconssion: A55350
Cisconssion: A55350
Cisconssion: A55360
Ciscons Repasteris: N.G.: Cadle, A.: Logie, L.J.: Portucous, M.E.M.: Schwartz, C.E.: Stevens Ceil 79, 669-678, 1994

Althure isolation and characterization of the faciogenital dyspiasia (Aarskog-Scot Althure isolation and characterization of the faciogenital dyspiasia (Aarskog-Scot Althure isolation and ASS 80; MCID:95042764; PMID:7954831
Althure isolation and ASS 80; MCID:95042764; PMID:7954831
Althure is preliminary
Alkolecule type: mRNA
Althure isolaterial in ASS 80; MID:9595424; PID:9595425
Althure isolaterial in ASS 80; MID:9595424; PID:9595425
Althure isolaterial in ASS 80; MID:9595424; PID:9595425
Althure isolaterial in ASS 80; MID:9595424; PID:9595425
Althure isolaterial in ASS 80; MID:9595424; PID:9595425

3 Gaps 16; 23.1%; Score 87; DB 2; Length 961; 34.8%; Pred. No. 1.2; Live 5; Mismatches 22; Indels Overy Match Best Local Similarity 34.8 Matches 23; Conservative

2 PPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLIRSGLKRTPSLKPDVPPKPSFAPL 61 ð a

52 STSMKP 57 \hat{s} qq

171 PRMPPP 176

RESULT 2 A59288

Myosus heavy chain Myr 8 - rat
Cospecies: Ratus norvegicus (Norway rat)
Cospecies: Batus norvegicus (Norway rat)
Cospecies: Batus norvegicus (Norway rat)
Cospecies: Batus norvegicus (Norway rat)
Cospecies: A59288

Filatei. K.G.: Liu, C.: Cameron, P.L.: Cameron, R.S.
Submitted to Geneant, November 1959
A.Bescription: Identification of a Novel Mammalian Myosin Class, XVI, in Developing
A.Bescription: Identification of a Novel Mammalian Myosin Class, XVI, in Developing
A.Bescription: A59288
A.Bescription: A59288
A.Bescription: AND Compared with conceptual translation
A.Molecule type: ERNA
A.Residues: 1-1322 <PAT>
A.Cross references: GB.AF209114: PIDN:AAF20150.1
A.Residues: a 1-1322 <PAT>
A.Cross references: GB.AF209114: PIDN:AAF20150.1
A.Reperiamily: myosin motor domain homology <PAMO>
Cosperiamily: myosin motor domain homology <PAMO>

21.4%; Score 80.5; DB 2; Length 1322; 38.4%; Pred. No. 7.4; Best Local Similarity Query Match

zinc-finger protei

B47236

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18.5

69.5

58

N

13; Gapes

la de la

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Mismatiches

Conservative

587

Matches

9 ò g

77 ANSPSVSPPLPNDS 90

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C. Accession: E8625.
R. Theologis. A.; Ecker, J. R.; Falls, C. J.; Federspiel, N. A.; Kaul, S.; White, O.; Alcardiologis. A.; Ecker, J. R.; Falls, C. Conway, A. B.; Conway, A. B.; Creasy, T. H.; Dewar ansen, N. F.; Hughes, B.; Huiza, L.; Conway, A. B.; Conway, A. R.; Creasy, T. H.; Dewar ansen, N. F.; Hughes, B.; Huiza, S.; Khaykin, E.; Kir A. A. Authors: Hinter, J. L.; Dekkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kir C. A.; Li, J. H.; Li, Y.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marz; Rizzo, M.; Rooney, T.; Roduey, D.; Sakano, H.; Sahano, P.; Southwick, A. M.; Sun, H.; Tal. Ker, M.; Way, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R. W.; A. M.; Sun, H.; Tal. A.; Heferconce number: AB6141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Algebraches of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the co
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPPARQRVDS1QVHSSQPSGQAVIVSRQPSLNAYNSLTRSGLKRTPSLKPDVPPKPSFAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PFPAPQR------GOAVTVSRQPSLNAYNSL 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A)Cross-reforences: GB:AE005172; NID:q3157926; PIDN:AAC17609.1; GSPDB:GN00141
C)Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Opate: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jun-2000
                                                                                                                      hypotherical protein [imported] - Arabidopsis thallana
C.Species: Arabidopsis thallana (mouse-ear cress)
C.Date: D2:Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Superfamily: elk-1 transforming protein; ets DNA-binding domain homology 26-105/Domain: ets DNA-binding domain homology <ETS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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submitted to the EMBL Data Library, May 1998
Assertiption: The sequence of C. e.ecans cosmid 637FS.
AsReterence number: 221283
AsRetereston, T3103
Assertion: Preliminary, Translated from GB/EMBL/DDBJ
Assertion: preliminary, Translated from GB/EMBL/DDBJ
Assertion: preliminary, Translated from GB/EMBL/DDBJ
Assertion: preliminary, Translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 76.5; DB Pred. No. 9.6; 4; Mismatches
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30.3%; Pre-
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C:Species: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20.1%;
30.5%;
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Guery Mattch
Hest Local Similarity 30.39
Matches 20: Conservative
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A:Introns: 94/3: 188/2: 330/1
G;Suberfami'v: A:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 30.9
Matches 30, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    449 MSPSVR 454
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A: Residues: 1-744 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A:Status: preliminary
A:Molecule type: DNA
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                                          RESULT 5
E86255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
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                                                                                                                                                                                                                                                                                                                                                          RESULT 3
190546
hypothetical protein F20516.310 - Arabidopsis thalliana
hypothetical protein F20516.310 - Arabidopsis thalliana
C:Species: Arabidopsis thalliana .mouse-ear cress)
C:Species: 37-Apr-1999 #sequence_revision 23-Apr-1999 #sequence_revision 23-Apr-1999 #sequence_revision 23-Apr-1999 #sequence_revision 25-Apr-1999 #sequence Tofs446
R:Bevan, M.; Wedler, H.; Kutzner, M.; Wambutt, R.; Bancroft, I.; Mowes, H.W.; Mayer, K.B.
Submitted to the Protein Sequence Database, February 1999
A:Reference number: 215420
A:Accession: Tofs646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ×
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N;Alernate names: protein T1405.176
C;Species: Arabidopsis thaliana (mouse-car cross)
C;Datc: 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence_revision 20-Apr-2000 #sequence Darabase. However, However, However, However, However, However, However, However, However, Edward Assection: T47463
A;Accession: T47463
                                                       1248 PVPMAVDSLAGALAGNEASPS ----SRSPSLHSVPSKILJSTGL---PSPRKQPPFRKRIPN 1296
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0.5
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3 PAPQAVDSTOVHSSQPSGGAVTVSRQPSLMAYNSLIRS-CLKRTPSLKPDVPFKPSTAP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 PPAPQRVDSIQVHSSQPSGQAVIVSRQPSSLNAYNSLIRSGLKRIPSLKPD------VPP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
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C, Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A/Status: proliminary
A/Molecule type: DNA
A/Residues: 1-175 <JOR>
A/Cross-reterences: EMBL:AL138649
A/Experimental source: cultivar Columbia: BAC clone T146%
C)Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               255
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A; Residues: 1-1:11 <BEV>
A; Cross-references: FMBL:ALC3553;
                                                                                                                                                                                                                                        1299 TRLSASYEAVSAC 1311
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                                                                                                                                                            61 -- LSTSMKPNDAC 73
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Bost Local Similarity
Them 20: Conserve
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A:Map position: 4
A:Introns: 139/2; 675/3
A:Note: F20516.310
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A: Note: T14D3.170
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A:Title: The mouse DNA binding protein Rc for the kappa B motif of transcription are family of large transcriptional proteins.

A:Reference number: 222238; MUID:97001141; PMID:8812474

A:Accession: T42717

A:Status: proliminary; translated from GB/EMBL/DDBJ

A:Molecule type: mRNA

A:Residues: 1-2282 <WIL.

A:Cross-references: EMBL:146815; NID:91377885; PID:91377886; PIDN:AAB40884.1

C:Genetics:
   C:Kcywords: phosphoprotein: zinc finger
F:146,204,480/Binding site: phosphate (Ser) (covalent) (by casein kinase II) #statu
F:349/Binding site: phosphate (Tyr) (covalent) #status predicted
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111 ELHRROPKGMAVVTGR-PRXDCAKFLTTHGIE---DLFPVQIWLEDCPPKPSPEPILLAL 166
                                                                                                                                                                                                                                                                                                                                     43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12 QVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTPSLKP-----DVPPKPSFAPLSTSM 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA-binding protein Rc - mouse
NiAlternate names: 19 kappa chain gene enhancer Recognition component
Cispecies: Mus musculus (house mouse)
Cispecies: 1-7a-2000 #sequence_revision 11-7an-2600 #text_change 18-Feb-2000
CiAccession: T42177
R:Mu, L.C.: Liu, Y.; Strandtrann, J.; Mak, C.H.; Lee, B.; Li, Z.; Yu, C.Y.
Genomics 35, 415-424, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A:Description: binds V(D)J recombination signal sequence and kappa B motif C:Superfamily: HIV-EP2 enhancer-binding protein C:Reywords: DNA recombination: transcription factor
                                                                                                                                                                                                                                                                                    PPPAPQ-----RVDSIQV------HSSQPSGQAVTVSRQPSENAYNSLTRSGLK
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                                                                                                                                          20.1%; Score 75.5; DB 2; Length 497;
25.8%; Pred. No. 7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerry Match 19.7%; Score 74; DB 2; Length 452; Best Local Similarity 34.4%; Pred. No. 9.7; Matches 21; Conservative 8; Mismatches 22; Indels
                                                                                                                                                                                                                     32;
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                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155 OPPA - PPEPPPVSAPAREAAPPASAAT 181
                                                                                                                                                                                                                                                                                                                                                                                                                              44 RIPSLKFOVPPKPSFAPLSTSMKPNDACT
                                                                                                                                                                           Local Similarity 25.8%; Promes 23; Conservative 15;
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Best Local S
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C:Function:
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A:Residues: 1-497 <TSD3-7
A:Residues: 1-1097 <TSD3-1
A:Experimental source: pancreating islet
C:Comment: This protein plays a role in the control of transcriptional initiation of gen
and between the introns of the mouse gene for immunoglobulin M-D.
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C.Species: Homo sapiens (man)
C.Date: 31-Jan-1997 #sequence_revision 51-Jan-1997 #text_change 05-Nov-1999
C.Accession: JG576
E.Accession: JG576
Brothsui, H.: Sakatsume, O.: It.Kura, K.: Yokoyama, K.K.
Biochem. Blophys. Res. Commun: 226, 810-809, 1996
A.Title: Members of the MAZ lamily A novel cDNA Clone for MAZ from human parcreatic
A.Reference number: JG5076: MUID:96428591: PMID:8831693
                                                                                                                                                                                                      zinc finger protein MAZ - human (fraqment)
NyAltornate names: WYC-associated zinc finger protein MAZ; zinc linger protein ZEB7
C.Species: Homo sapiens (Can)
C.Date: 03-Mar-1994 *sequence_revision 03-Mar-1994 *text_change 03-Jun-1996
C.Jacession: A421270, A46183
Biochemistry 31, 4102-4110, 1992
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SROCRKR--SLSPSTTSSTTAPPPPPPPPPPRKGMKPN 245
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Bost Local Similarity 35.1%;
Matches 27; Conservative 9
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Best Local Similarity 34.7%;
Matches 25, Conservative (
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C:Superfamily: human ALR protein
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                                              155 DRGPVLTETKP 165
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41308
hypothetical zinc-finger protein - fission yeast (Schizosaccharonyces purher C) Species: Schizosaccharonycs pombe C) Species: Schizosaccharonycs pombe C) Species: Schizosaccharonycs pombe C) Species: Schizosaccharonycs pombe C) Species: Schizosaccharonycs pombe C) Species: On-Dec-1999 #sequence_revision O3-Dec-1999 #text_change C2-Sep-2000 C) Accession: T41308
R) Mode College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College College Col
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hypothetical protein, 69K - turnip yellow mosale virus

chaces: turnip yellow mosale virus, TYMV

Chacesion: $01955

Reference submission: $01955

Andered Acids Res. 16, 6157-6173, 1988

Antitle: Overlapping open reading frames revealed by complete nucleoside secundarial entitle: Overlapping open reading frames revealed by complete nucleoside secundarial entitle: Overlapping open reading frames procession: $01955; MUD:88289359; PMID:3399368

Andered and Soliss Andered entitle: S01955; MUD:88289359; PMID:3399368

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 PPAPQRVDSIQVHSSQPSGQAVIVSRQPSLNAYNSLIRSGLKRTP----SLKPUV-PPKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29; Gaps
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25;
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7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11: Mismatches
Pred. No. 63:
6; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19.4%; Score 73;
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Best Local Similarity 29.6%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.48;
Best Local Similarity 38.1°
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20: Conservative
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Best Local Similarity
Matches 20: Conserv
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Siprasad, B.: Zhadanov, A.B.: Sedkov, Y.; Bullrich, F.; Druck, T.; Rallapalli, R.: Yongqene 15, 549-569, 1997
Artifus Structure and expression pathern of human ALR. a novel gone with strong hom ArReference number: 214954; MJLD:97388474; PMID:9247308
A.Reference number: 214954; MJLD:9738484; PMID:9247308
Frobable SE15 protein (Helianthus annums) [imported] - Arabidopsis thaliana Cisperies: Arabidopsis thaliana (Conservation C2-Feb-2001 *text_change 17-May-2002 C16-May-2001 *Sequence_revision 02-Feb-2001 *text_change 17-May-2002 C16-C15-May-2001 *Sequence_revision 02-Feb-2001 *text_change 17-May-2002 C16-C15-May-2001 *Sequence_revision 02-Feb-2001 *text_change 17-May-2002 C16-C15-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-May-104-
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C)Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 PPPAPQRVDS1QVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTPSLKPDVP----PKP 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A)Cross references: GB:AECC2093; NID:92281102; PIDN:AAB64038.1; GSPDB:GN00139
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C:Date: 24-Mar-1999 #sequence_revision 24 Mar-1999 #text_change 21-Jul-2600
C:Accession: T03455
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.Superfamily: Arabidopsis thaliana hypothetical protein T16L24.240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 72.5; DB 2;
Pred. No. 1.8e+02;
6; Mismatches 24;
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RESULT 15
T03454

ALR protein - human
CiSpecies: Homo sapiens (man)
CiSpecies: Man 1999 #sequence_rovision 24-Mar 1999 #text_change 21-0:1-2000
CiDate: 24-Mar 1999 #sequence_rovision 24-Mar 1999 #text_change 21-0:1-2000
CiDate: 24-Mar 1999 #sequence_rovision 24-Mar 1999 #text_change 21-0:1-2000
CiDate: 24-Mar 1999
Riprasad: 15.49-560, 1997
Aritle: Structure and expression pathorn of horn als, a novel gone with strong homolog A:Reference number: 214954, MUD:97886474, PMUD:923868
A:Reference number: 214954, MUD:9786474, PMUD:923868
A:Reference number: 214954, MUD:9786244, PMUD:923868
A:Reference: mRNA
A:References: EMBL:AF010403; NID:92356284, PMUN:AAC51734.1; FUD:92356285
A:Const. A:R
A:References: EMBL:AF010403; NID:92356284, PMUN:AAC51734.1; FUD:92356285
C:Genetics:
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19.3%: Score 22.5; UB 1: Loughh 526.;
Best Local Similarity 34.7%: Prod. No. 26-02:
Matches 25; Conservative 6; Mismanches 4; Indels 10.
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Search completed: September 30, 2003, 16:35:30 Job time : 55 secs

03 O3

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Genfore version 5.1.6
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OM protein - protein search, using sw model

Run on: September 36, 2003, 15:15:62 : Search time 38 Seconds (without allgaments) 65:163 Millen cell quares/ser

1: US-09-856-681-4

Perfect score: 376 Sequence: 1 PPPAPQRVDSIGVHSSOFSG......FPKPSFAPLSTSMKPNDACT 72

Scoring table: BLOSUM62 Gapop 10.0 , Gapaxt 0.5 Scarched: 127863 seqs, 47026705 residues

Total number of hits satisfying thosen parameters: 12386,

Minimum DB seq length: 0 Maximum DB seq length: 2660090000

Post-processing manners watch 50%
Maximum Match 50%
Listing List, 45 summaries

Database : SwissProt_41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARI

	ptio	09h2e6 Nome sapien	33	mus m		_		homor	homod	phyto		rattr	Pl6357 turnin vell	SILE			schi2	,			O64028 musculu	256670 mesocripetu	_	P27546 mus museilu	P33400 saccharomyc	P19532 Romo sapien			Q8wxx7 homo sapien	-	~	l tarnig	78 tarni	:-
SUMMARIES	QE.	SM6A_HIJMAN	FGD1_HUMAN	ZYX_MOUSE	M4K3_RAT	FGD1_MCUSE	GAT5_HUMAN	MA2_HUMAN	PCIO_HUMAN	HIS7_PHYPR	M4K3_HUMAN	PCLO_RAT	V70K_TYMV	TFE3_MOUSE	SCEL_HUMAN	PHC1_HUMAN	PS11_SCHF0	ELKI_HUMAN	21PA_SHEON	PRH1_SCHPO	PROT_MOUSE	MAZ_MESAU	MAZ_MOJSE	- 1	R101_YEAST	TFE3_HUMAN	SKN1_CANAL	NAH2_HUMAN	ACI2_HUMAN	ELK1_MOUSE	CO2A_HUMAN	V76K_TYMVA	V70K_TYMVC	MUC2_BUMAN
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		376	87	86.5	86	7.7	75.5	75.5	75.5	7.4	74	73.5	72.5	71.5	71.5	71.5	73.5	7:	70.5	30	7.0	69.5	69.5	69.5	58.5	68.5	68	99	99	67.5	67.5	67.5	67.5	67.5
	Result No.		7	٣	4	S	9	۲.	8	9	0		12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	58	30	31	32	33

caencrhabdi	human adeno		drosophila	rattus norv	homo sapien	homo sapien	homo sapien	home sapien	saccharomyc	mycobacteri	
P34292	P03265	P53974	P52172	P48763	095486	P27816	P51610	043516	002805	P46697	P09026
YKO4_CAHEL	DNB2_ADE05	KNCO_YEAST	SRP_DROME	NAH2_RAT	S24A_HUMAN	MAP4_HUMAN	HFC1_HUMAN	KAIP_HUMAN	RCD1_YEAST	PPIB_MYCLE	HXB3_MOUSE
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315	529	638	579	813	1378	1152	2035	503	837	295	4 \$ 5
וצ	7.8	17.8	17.8	17.8	17.8	17.8	8.21	17.7	17.7	17.6	17.6
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		29	25	67	rs- vo	63	F.3	8.5.5	56.5	99	99

ALIGNMENTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nagase T., Kikuno R. Ishikawa K.-I., Hirosawa M., Ohara D.;
"Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 156 new cDNA clones from brain which code for large proteans in vitro.";

Full Complete sequences of 156 new cDNA clones from brain which code for large proteans in vitro.";

-: Full Clone: Can act as regulsive axon guidance cues. May play a role in channeling sympathetic axons into the sympathetic chains and controlling the temporal sequence of sympathetic target innervation (By similarity)

-: SUBCINITIANTIANT LOCATION: Type I membrane protein.
                                      09B2E6; 09P2E9;
15.SEP-2003 (Rel. 42, Created)
15.SEP-2003 (Rel. 42, Last sequence update)
15.SEP-2003 (Rel. 42, last annotation update)
5.SEP-2003 (Rel. 42, last annotation update)
(SEPAbok-1).
                                                                                                                                                                                 Bomo sapiens (Human).
Makaryodas Metazoda; Chordata: Cranjata; Vertebrata; Buteleostomi;
Mammalja; Buthoria; Primates: Catarrhini; Hominidae; Homo.
WOMI_Tax1D=9606;
                                                                                                                                                                                                                                                                                 SECURNCE FROM N.A., AND INTERACTION WITH FUL.
MEDLINE-2056439; PubMed 10993094;
Klostcommann A., Lutz M., Gertler F., Behl C.;
"the orthologics humar, and murine semmphorin 6A-1 proteins (SEM46A-1/Sema6A-1) bind to the enabled/vasodilator-stimulated phosphorocularities protein (EVL) via a novel carboxyl-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note-No experimental confirmation available; SIMILARITY: BELONGS TO THE SEMAPHORIN FAMILY. SIMILARITY: Contains 1 Sema domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Svent=Alternative splicing: Named isoforms=2;
Name=1;
                       1030 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name-2;
IsoId-Q9H2E6-2; Sequence=VSP_007113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IsoId-Q9H2E6-1; Sequence-Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                            Biol. Chem. 275:39647-39653(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Brain;
MEDLINE=20181126; PubMcd-10718198;
                       STANDAPTE
                                                                                                                                                              SEMA6A OR KIAA1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                             zyxin-like domain
                       HIMAN
SM6A_HUMAN
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N-LINKED (GLCNAC. ...) (POTENTIAL).
N-LINKED (GLCNAC. ...) (POTENTIAL).
N-LINKED (GLCNAC. ...) (POTENTIAL).
N-LINKED (GLCNAC. ...) (POTENTIAL).
N-LINKED (GLCNAC. ...) (POTENTIAL).
N-LINKED (GLCNAC. ...) (POTENTIAL).
N-NOTESPELPDNEMSENTIVY (In isoform 2).
                                               Interpro. IPW605275 Sema.
Pfam: PF01403; Sema.
Pfam: PF01403; Sema.
SMART: SM0423; PSI. 1.
SMART: SM05630; Sema: II.
Signal: Transmembrane: Multimete lamily; Neuromenesis: Glycoprotein:
Developmental protein; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Craniolacial;
MEDLINE-95042764; PhMed-7951831;
MEDLINE-95042764; PhMed-7951831;
Masteris N.G., Cadle A., Logie L.C., Forteous M.E.M., Schwartz C.E.,
Stevenson R.E., Gover T. M., Wilroy R.S., Gorski J.L.,
"Isolation and characterization of the faciogenital dyspinsia
(Aarskog-Scott syndrome) gener a putative Rhc/Rac quanine nucleotide
exchange Lactor."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-22338257; FubMed-12477932; Strausberg R.L., Feingold E.A., Grouse L.H., Bornge J.S., Strausberg R.L., Collins F.S., Wagner L., Siconen Culm, Schulor G.D., Altschul S.F., Zeeborg B., Buerdow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FGD1_HUMAN STANDARD; PRT; 96; AA.
P98174: 288459;
01-0CT-1996 (Rel. 34, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-SEP-2003 (Rel. 42, Last sequence update)
Putative Rho/Rac quantue nucleotide exchange tactor (Rho/Rac GFF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vermenatu, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo,
                                                                                                                                                                                                                                                                                                                                   0:
                                                                                                                                                                                                                                                                                                           100.0%; Score 376; DB 1; Lenath 1030; ilarity 100.0%; Pred. Nc. 1.6e-29; Conservative 0; Mismatches 0; indels 0
                                                                                                                                                                                                                                                                                       A57B79C10AEC4334 CRC64;
                                                                                                                                             EXTRACELLULAR (POTENTIAL)
                                                                                                                                                      POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                             /FTIG=VSP
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EMBL: AF279656: AAG29378.1: -.
EMBL: AB037789: BAA92606.1: ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Faciogenital dysplasia protein).
                                             InterPro: IPRC03659: Pleximilike
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                     Genew: HGNC:10738: SEMA6A.
MIM: 605885; -.
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                                                                                                                       18
1030
649
670
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nes 72; Conserv
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NCBI_TaxID-9636;
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AC P981
D 16-0
DD 28-1
DD 28-1
DD 16-5
DE Para
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DD PROPI
DD 15-8
DD PARA
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EMBL: X99063; CAA67510.1; -:
MGD: MGT:103072; Zyx.
InterPro; IPR001781; LIM.
                                                                                                                                                                                            Piam: PF00412; LIM: 3.
ProDom: PD000094: LIM: 3.
SMART: SM00132; LIM: 3.
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495
562
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23: Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2. PPAPQRVDSIQVHSSQPSIQAVTVSRQPSLNAVNSLTRSGLKRIPSI KPDVLPKPSFAHL, AL
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Otte J., Reschann A., Brolen G., Bockerle M.C., von der Ahe D.)
Submitted (JUL-1996) to the EMBL/Genback/frohl databases.
-!- FUNCTION: ADMESTON PLACUE PROTEIN: BINDS ALPHA-ACTININ AND THE ORP-PROTEIN: MAY BE A COMPONENT OF A SIGNAL TRANSDICTION PATHWAY THAT MEDIATES_ADMESTON-STIMCLATED CHANGES IN GENE EXPRESSION (BY
                                                                                                                                                                                                                                                                                                                                                                                             * RRAPGARTPGHEFA (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculis (Mouse).
Eukaryota, Metazoa, Chordati, Craniatu, Vertebrata, Euteleostomi,
Mammalia, Euthoria, Rodentii, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY).
SUBGELLULAR LACATION: CYTOPLASMIC: ASSOCIATES WITH THE ACTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Macalma T., Otte J., Hensler M.B., Bockholt S.M., Louis H.A., Kalff-Saske M., Grzeschik K.H., von der Ahe D., Beckerle M.C.; "Molecular characterization of human zyxin."; Biol. Chem. 271:31470-31478(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23.1%; Score 87: 08 7: Length 961;
84.8%: Pred. No. 0.65;
                      PROSITE; PS00741; DH_1; FALSE_NEG.
PROSITE; PS50010; DH_2; 1.
PROSITE; PS50003; PH_DOMAIN; 2.
PROSITE; PS50179; ZF_FYVE; 1.
Guanine-nucleotide releasing factor; Zinc-finger; Repeat; Disease mutation.
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                                                                                                                                                                                              (POTENTIAL).
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                                                                                                                                                                                                                                                                                                   E -> E (IN AAS).
/FTIG-VAR_0152%.
E -> Q (IN AAS).
/FTIG-VAR_0152??.
AGPSEDEHPATNIP -> A
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                                                                                                                                                                                                                                                                                                                                                                                                                                 BEW N1) 0 4-
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SH3-BINDING
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MEDLINE-97094926: PubMed-8910160;
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                                                                                                                                                                                                                                                                                                                                                                                                                                   195 A
106560 MW;
SMART; SM00325; RhoGEF; 1.
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921
522
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                modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I PPPAPQRVDSTQVHSSGPSGQAVTVSRQPSDAAYNSLIRSGLKRIPSLKPDVPPKPSFAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-5EP-2003 (Rel. 42, Created)
15-5EP-2003 (Rel. 42, Last sequence update)
15-5EP-2003 (Rel. 42, Last annotation update)
Mitogen-activated protein kinase kinase kinase kinase 3 (EC 2.7.1.37)
MARX/ERK kinase kinase kinase kinase kinase kinase comminal center kinase related protein kinase) (GLK) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ramjaun A.R., Angers A., Legendre-Guiliemin V., Tong X.-K.,
McPherson P.S.,
"Endophili: regulates JNK activation through its interaction with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryota: Metazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Marmalia: Eutheria; Rodentia: Sciurognathi; Muridae; Murinae: Rattus.
NCBL_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to regulate
is in
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-:- CATALYTIC ACTIVITY: ATP + a protein - ADF + a phosphoprotein.
-:- COFACTOR: Magnesium (By similarity).
-:- SUBUNIT: Interaction appears to regula MAPAK3-mediated JNX activation.
-:- SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              7
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Appears to act upstream of the c-jun N-terminal pathway (By
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LIM 2.
LIM 2.
LIM 3.
REA A (IN REF. 1).
REXCLEMBE - NORWERDEA (IN REF. 1).
REXCLEMBE - NOREE 1).
KA - C (IN REF. 1).
KA - COTETERSCRADALEB CMC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23.03; Score 86.5; DB 1; Length 34.38; Pred. No. 0.4;
                                                                                                                                                                                                                                                                                                     Report, LIM domain, Notal-binding, Zinc, Cell adhesion.
DUMAIN 64 77 PRO-RICH.
DOMAIN 94 1.88 PRO-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A., AND INTERACTION WITH SH3GL2
MEDLINE-21369947; PubMed-11384986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    852 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11: Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: Contains 1 CNH domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           germinal center kinase-like kinase.";
J. Biol. Chem. 276:28913-28919(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRI;
                                                                                                                                                                                                                                                           PROSITE, PSC0478, LIM_DOMA:N_1;
PROSITE, PSSC023: LIM_DOMAIN_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 PPPAPQRVDSIQV----HSSQFSGQAVIVSRQPSLMAYNSLTRSGLKRTPSLKFPVFPKP 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- FUNCTION: ACTIVATES THE RAS-LIKE FAMILY OF RED AND RAC PROTEINS BY EXCHANGING BOUND GDP FOR FREE GIP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Būkaryota; Metazos: Chordata: Craniaia; Veriebrata: Boteleos: emi:
Mammalia: Eutheria: Rodentia Sciurognathi: Muridae: Murinae: Mus
NCBL_TaxID=10990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-001-1996 (Rel. A4, Cremied)
01-001-1996 (Rel. A4, Last sequence update)
28-78/8-2063 (Rel. 41, Last semiciation spaces)
Putative Rhogkec guanine nucleotide exchange Lactur (Sm./Kar OEP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=96081343: PubMed-8535075; Pasterial K., Herman G., Pasterial N.G., de Gouyon B., Cadle A.B., Campbell K., Herman G., Gorski J.L., Caloning and regional localization of the mouse :accognical
                                                                                                                                                              R MBL; AP31224; AAK5324.1; -...
R MSSP; P24941; 1BHE.
R InterPro: IPR001196; Cit.rol.; R InterPro: IPR001199; Prot. Kinaso.;
R InterPro: IPR002190; Ser_thr_pkinaso.;
R Pfam: PP00569; CNH: 1.
R PFam: PF00369; Prot. Kinase: 1.
R PROSTE; PS00306; CNH: 1.
R PROSTE; PS00107; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00107; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00107; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00107; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTE; PS00108; PROTEIN_KINASE_ATP: 1.
R PROSTER: PS00108; PROTEIN_KINASE_ATP: 1.
R PROTEIN_KINASE_ATP: 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
BY SIMILARITY.
58013A03B0A3287F GRC64;
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-1- SIMILARITY: Cottains 1 DBL homology (BE) domain.
-1- SIMILARITY: Contains 2 PH domains.
-1- SIMILARITY: Contains 1 FEVE-type zinc tinger.
between the Swiss institute of Bioloformatics
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Faciogenital dysplasia protein homolog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125
97390 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dysplasia (Fgdl) gene.";
Mamm. Genome 6:658-661(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Hest Local Similarity 34.7°
Marches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPPOKPAVIGN 46:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57 SFAPLSTSMKPN 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11
34
125
862 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FGD1_MOUSE
P52734;
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SEQUENCE
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DOMAIN
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FGD1_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PPAPQRVDSIOVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRIPSLKPDVPPKPSFAPL 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDINE-21638749; PubMed-11780052; Deloukas P., Matthews L.H., Ashurst J., Babbage A.K., Badguley C.L., Jones M., Stavrides G., Almelda J.P., Babbage A.K., Badguley C.L., Badiesy J., Bartow K.E., Bates K.W., Beard L.M., Beare D.M., Beasley C.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Buck D., Burk D., Burk D. Carder C., Carter N.P., Chapman J.C., Clark G., Clark L.N., Clark S.Y., Clee C.M., Cohlson A., Cobley V.E., Callier R.E., Condor R.E., Corby N.R., Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M., Ellington A.G., Frankland J.A., Fraser A., French L., Garner P., Berafham D.V., Griffiths C., Gliffiths R. N.D., Gwilliam R., Hall R.E., Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24; Indels 16; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Czaniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria: Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                      InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterPro: InterP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41C1B84DE490FC51 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRO-RICH.
SH3-BINDING (POTENTIAL).
SH3-BINDING (POTENTIAL).
PH 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2001 (Rel. 41, Created)
28-FEB-2004 (Rel. 41, LAst sequence update)
28-FEB-2003 (Rel. 41, Last acnotation update)
Transcription factor GATA-5 (GATA binding factor-5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                397 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FYVE-TYPE.
                                                                                                                                                                                                 #SSP: 007889; TAME;
MGD: MGI:104566; Fgdl;
InterPro: 1PR001391; GDS_GDG24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106477 MW;
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31.8%:
                                                                                                                                                                            EMPL: U22325; AAA96001.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD
                                                                                                                                                                                                                                                                                          InterPro: IPR001849; PH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          789
920
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    171 PRVLPP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960 AA;
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Q9BWX5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZN_FING
DOMAIN
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CATS_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loca
Matches
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Mammalia: Butheria; Primates: Catarrhini; Hominidae; нощо.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               277 PRPLAMKKESIQTRKRKPKTIAKARGSSGSTRNASASPSAVASTDSSAATSKAKPSLASP 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----SOQAVIVSRQPSLNAYNSLTRSGLKRIPSLKPD 51
Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson B., Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., Lehvaeslaibo M.H., King A., Lindd C.M., Lawlor S., Martin G.C., Martin G.C., McDay K., McDay K., McMurray A.A., Minne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., Millimore B.J.C.T., Patchellingam S.R., Flumb R.W., Ramsay H., Phillimore B.J.C.T., Prathallingam S.R., Flumb R.W., Ramsay H., Skuce C.D., Smith M.L., Scderlund C., Steward C.A., Silston J.B., Swann R.M., Sycawore N., Tragecy A., Tromans A.C., Vandin R., Wall M., Wallis J.W., Thombe A., Hilliams E., Williams E., Williams S.A., Wilkichead S.L., Whittaker F., Willey D.L., Williams E., Williams S.A., Bongers J., Wilking L., Wray P.W., Hebbard T., Durkin F.M., Sentiley D.R., Herk S., Bongers J., Wilking L., Wray P.W., Hebbard T., Durkin F.M., Sentiley D.R., Herk S.,
                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
Eukaryota: Metazoa: Chordali: Cranlata: Vertebrata: Eutelensiomi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00326; GATA; 2.
PRINTS; PR06619; GATACKFINGER.
SMART; SMO0401; ENFEATA : 1.
PROSITE: PS00344; GATA_ZN_FINGER_1; 2.
PROSITE; PS50114; GATA_ZN_FINGER_2; 2.
Iranscription_regulation: Activator; DNA-binding; Zinc-finger;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MAZ_HUMAN STANDARD; PRT: 477 AA. P56270: Q15703; Q99443; Standard: 36, Created) 15-JUL-1998 (Rel. 36, Last sequence update) 15-JUL-2098 (Rel. 42, Last sequence update) 15-SRP-203 (Rel. 42, Last annotation update) Myc-associated zine finger protein (MAZI) (Purine binding transcription factor) (Pur-1) (ZF87) (ZF87).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDFBA02085695057 CRC64;
                                                                                                                                                                                                                                                       INANSMALLANDER (By Similarity).
-1- SUMCELLULAR LOCATION: Nuclear (By Similarity).
-1- SIMILARITY: Contains 2 GATA-type also Fingers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 75.5;
Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATA-TYPE.
GATA-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro: IPRC06679; Znf_GATA.
Pfam; PF05349; GATA-n; I.
Pfam: DE00300 ATT-
                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL: AL499627; CAC35001.1: -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        397 AA: 41299 KW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20.1%;
29.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          337 VCPGPSMAPQASCCE 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PPPAPORVDSIQVHSSQP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Quory Match
Best Local Similarity 29.10,
Thes 22, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52 VPPKPSFAPLSTSMK 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                Genew; HGNC:15802; GATA5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              213
257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nuclear protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P17679;
                                                                                                                                                                        Rogers J.;
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1D MAZ_H
AA P5AZ
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DT 15-JC
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DE Trans
GN MAZ.
GN MAZ.
OC EUXAI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-92232709; PubMed-1567856;
Pyrc 3.J., Moberg K.B., Hall D.J.;
"Isolation of a novel cDMA encoding a zinc-finger protein that binds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parks C.L., Shonk T.,
"The serotonin la receptor gene contains a TATA-less promoter that
                                                                                                      SECUENCE FROM N.A.
MEDLINE-92366479; PubMed-1502187;
Mossone S.A., Asselin C., Patel A.J., Marcu K.B.;
MMSZ, a zinc finger protein, binds to c-MYC and C2 gene sequences regulating transcriptional influence and termination.";
Proc. Natl. Acad. Sci. U.S.A. 89:7452-7456(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tsutsui H., Sakatsume C., Itakura K., Yokoyama K.K.;
Whenbers of the MAZ tamily: a novel cDNA clone for MAZ from human
panerealle islet cells."
Blochem. Blophys. Res. Commun. 226:801-809(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to two sites within the c-myc promoter."; Biochemistry 91:4102-4110(1992).
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EMBL: M9339; :: NOT_ANNOTATED_CDS.
EMBL: D8513; BAA12728:1; ALT_INIT.
EMBL: G3519; AAB54121:1; ALT_INIT.
EMBL: A42170; A42170;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Pancreatic (slets:
MEDLINE-96428551; Pubmed 8431693;
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MEDLINZ-96224025: Pubmed-8626793;
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MIM: 600999; -.
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NCBI_TaxID=9606;
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SEQUENCE OF 4405-4439 FROM N.A.
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  69 PPPTPOAPAAEPLOVDLLEVLAANQESAAAAAAAAAAAAAAAAAAAAAAAASTVDTAALK 128
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Aczonin, a 550-kd putative scaffolding protein at prosynaptic active zones, shares homology regions with rim and tassoch and black profilin."
                                                                                                                                                                                                                                                 1 PPPAPQ-----RVDSICV-----HSSQPSGQAVIVSRQPSINAYNSITRSGLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Prediction of the obding sequences of unidentified human senes, 3X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro.":

[4]
                   PROSITE: PS00028; ZINC_FINGBE_C282_1: 5.
PROSITE: PS50157; ZINC_FINGBE_C282_2: 5.
Transcription regulation: Z.uc-tinger: Metal-tructin; DMA Dindins:
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota: Metazda: Chordata: Crammata; Vortebrata; Enteleostomm:
Mammalia: Eutheria: Primates: Catarrhin: Hominidae; Homo:
                                                                                                                                                                                                                               13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-99439764; PubMed-10509852;
Wang XL, Kibschull M., Lauc M.M., Lichte B., Petrasch-Parwed B.
Kilimann M.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nagase T., Ishikawa K.-i., Miyajima N., Tanaka A., Kotani H.,
Nomura N., Ohara O.;
                                                                                                                                                                                                             DB 1: Length 477:
                                                     C212 TYPE 2
C212 TYPE 2
C212 TYPE 4
C212 TYPE 4
C212 TYPE 6
C212 TYPE 6
POLY ALA
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POLY GIV
ECLY GIV
FOLY GIV
FOLY GIV
MSSING (IN REF. 3)
MISSING (IN REF. 3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kraemer J., Wollam C., Wohldmann P., KrGrane B.;
Submitted (DEC-1999) to the EMBL/GenBark/DGBG datamases
                                                                                                                                                                                         G04C80F32CAC6825 CRC64;
                                                                                                                                                                                                                                                                                                                                                            Q9Y6V3) 043373, C60305; Q9BVC8; Q9UIVZ; Q9Y6U9;
28-FEB-2003 (Rel. 41, Created)
FEB-2003 (Rel. 41, Last sequence update)
15-SFP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 3619-5147 FROM N.A. (ISSPORM 2)
                                                                                                                                                                                                                                                                                                                                                     PRT; 5147 AA
                                                                                                                                                                                                                    Pred. No. 3.7;
                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                         129 OPPA--PPPPPPVSAPAAEAAPPASAAT 155
                                                                                                                                                                                                            20.1%; Score 75.5;
25.8%; Pred. No. 3.7
                                                                                                                                                                                                                                                                                      RTPSLKPDVPPKPSFAPLSTSMKPNDAGT 72
                                                                                                                                                                                                                                                                                                                                                                                                  Piccolo protein (Aczonin) (Fragments).
PCLO OR ACZ OR KIAA0559.
                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=98290545; PubMed=9628581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell Biol. 147:151-162(1999).
                                                                                                                                                                                                                              15:
 Zof_C2H2: 1.
P C2H2: 6
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                                                                                                                                                                                           48607 MW;
                                               RNA-binding; Repeat; Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-759 FROM N.A.
                                                                                                                                                                                                                      Local Similarity 25.8 ses 23; Conservative
                                                                                                                                                                                                                                                                                                                                                     STANDARD:
                                                                                                                                                                                                                                                                                                                                                                                                                      Home sapiens (Human)
                                                                                                                                                                                         477 AA;
PD000003;
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                                                                                                                                                                                                                                                                                                                                           HUMAN
PCLO_BUMAN
Q9Y6VO; 0433
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                             Atausherg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Alausher R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
Altschul S.F., Zeoberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Zeoberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
A slopheton M. Soares M.B., Boraido M.F., Casavant T.L., Schoetz T.E.,
A stapleton M., Soares M.B., Boraido M.F., Carrinci P., Frange C.,
A stapleton M., Dedin T.B., Tonshiyuk S., Carrinci P., Frange C.,
A stapleton M., Dedin T.B., Tonshiyuk S., Carrinci P., Frange C.,
A stableton M., McKernan K.J., Malek J.A., Gubarathe P.B.,
A stableton D.K., Murony D.K., Sodergren E.J., Lu X., Glibs R.A.,
A sharts S., Worloy K.C., Halo S., Garcia A.M., Gay, L.J., Hallon E., Ketteman M., Madan A., Kodrigues S., Sanchez A.,
A halting M., Madan A., Young A.C., Shewchenko Y., Boulfard G.G.,
A Hutterfield Y.S.N., Krzywinski M.I., Skalska D., Smallus D.E.,
A Schierch A. Schor J.E., Jones S.J.M., Maria M.A., Shallus D.E.,
A Schierch M., Schot J.E., Jones S.J.M., Maria M.A., Shallus D.E.,

    -!- SUBUNIT: Interacts with Rabacl/Pral and profilin (By similarity).
    -!- SUBCELLUCAR LOCATION: Concentrated at the presynaptic side of

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kalicki J., Elliott G.:
Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: May act as a scaffolding protein involved in the
organization of symptic active zones and in symptic vesicle
trafficking (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00, 0000866, c:cytoskeleton: NAS.

00, 00:0042202, c:synaptic junction; ISS.

00:0005509; F:calcium for binding activity; ISS.

00:0005544; F:calcium-dependent phospholipid binding acti...

00:0005524; F:profillin binding activity; ISS.

00:00000010; F:profillin binding activity; ISS.

00:00000010; P:cytoskeleton organization and biogenesis; ISS.

00:0016080; P:synaptic vesicle targeting; ISS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. 0.5.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -:- POMAIN: C2 domain : is involved in binding calcium and phospholipids. Calcium binds with low affinity but with high specificity and induces a large conformational change.
-:- SIMILARITY: Contains 2 C2 domains.
-:- SIMILARITY: Contains 1 PDZ/DHR domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               isoId=09Y6V0-2; Sequence=VSP_003923, VSP_003924,
VSP_003926, VSP_063927;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Event-Alternative splicing; Named isoforms-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Comment-Additional isoforms seem to exist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isold-Q9Y6V0-1: Sequence-Displayed;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         synaptic junctions (By Similarity). ALTERNATIVE PRODUCTS:
MEDLINE-2288259; PubMed-12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL: Y19188; CAB66727.1; ...
EMBL: AC004863; AAD20746.1; ...
EMBL: AC004886; AAD21749.1; ...
EMBL: AB01131; BAA25485.1; ...
EMBL: AC004082; AAB97837.1; ...
TR: T00634; T00634.
USSP; P04410: 1AA2.
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                                                                                       InterPro: IPR006438; HADS-SF-LA-hypl.
InterPro: IPR006543; Histidinol-phos.
InterPro: IPR006834; Hydrolase.
InterPro: IPR0080807; iGPD.
Pfam: PF00702; Hydrolase; 1.
                                                                                                                                                                                                                                                                                                                                                        47961 MW;
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                                                                           EMBL: 211591; CAA77675.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 34.4
21; Conservative
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                                                                                                                                                                                                                                                                                                                                                        452 AA;
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     This SWISS-PROT entry is copyright. It is preduced through a collaboration between the Swiss institute of Bioinformatics and the EMBL cutstation the Buropean Hoinformatics institute and the restrictions on its use by non-profit institutions as long as its monthen; is in no way
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-! CATALYTIC ACTIVITY: D-erythro-1-(imidazol-4-yl)diycorol 3 phosphate = 3 - (imidazol-4-yl)-2-oxopropyl phosphate + H(2)0.
-!- PATHWAY: Histidine biosvnikesis; sixth slep.
-!- SIMILARIIY: Belongs to the imidazoleglycerol-phosphate dehydratase
                                                                                                                                                                                                                                                                                                                                                      S -> SONGLOIRIVGGKEIPGHSGEIGATIAKIIPGGSARE OTGKIMEG (in isotorm 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 PPPAPORVDSTQVHSSQBGGAVTVSROPSI NAYNSLTRSGIKRTPSILKPJVPPKPSFAP
                                                                                                                                                                                     10 X 10 AA TANDEM APPROXIMATE REPEATS P-A-K-P-O-P-O-O-F-X. C4-TYPE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                       /FILG-VSF_06323.

K -> KPTDGYRVVSHFTG8LG (in (soform /FILG-VSF_003924)

G -> GOWNVONAS (in isoform 2).
/FILG-VSF_003925.
IAHKS -> SKRRK (in isoform 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
15
10
                                                                                           PROSITE: PS00499; C2_DCMAIN_I: 1.
PROSITE: PS50004; C2_DCMAIN_I: 2.
Calcium/phospholipid-bindinq: Zinc: Metai-binding; Zinc:finger;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jonath 5147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
19-EB-2003 (Rel. 41, Last annotation update)
Imidazoleglyceroi-phosphate dehydratase (EC 4.2...19) (IGPD).
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Missing (in isoferm 2).
/FIId-VSP_003927.
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                                                                                                                                                                                                                                             C4-TYPE (POTENTIAL)
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C2 DOMAIN 2.
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Pred. No. 53
                                                                                                                                                                                                                                                                                POLY-PRO.
                   InterPro; IPR001565; Synaphotagmin.
BRINTS; PR00580; CZDOMAIN.
PRINTS; PR00399; SYNAPTOTAGMN.
SMART; SM00239; CZ; Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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                                                                                                                                              Repeat: Alternative splicing.
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InterPro; IPR000008; C2.
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512:
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P28624;
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(See http://www.isb-sib.ch/announce/
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and for commercial
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tan T.-H., Yao Z., "Activation of the c-Jun N-terminal Kinase pathway by a novel protein kinase related to human germinal center Kinase."; Proc. Natl. Acad. Sci. U.S.A. 94:9687-9692(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CNKNOWN ACTIVITY.
IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE.
CAE66BE32A9E53A1 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Metazoa; Chordata: Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarthini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (ISOFORM 2), FUNCTION, TISSUE SPECIFICITY, MUTACENSELS OF LYS-48.
TISSUE-Macrophage, and Skeletal muscle;
MEDILINE-97420743; Pubmed-9275185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19.7%: Score 74; DB 1; Length 452;
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Edwards J., Wohldmann P., Hawkins N., Harkins R.;
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
      Usage by
                                                                                                                                                                                                                                                                                                          Prodom; PD002282; TGP2; 1.
TIGREAMS; TIGR01548; HAD-SF-IA.hypl; 1.
TIGREAMS; TIGR01556; Histidinol-ppas; 1.
PRCSITE; PS00954; TGP_DSHYDRATASE_1; 1.
PRCSITE; PS00955; IGP_DSHYDRATASE_1; 1.
HISTIGINE BLOSYLLICSIS; LYASC; MILLIGINGLIONAL COMMING.
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8; Mismatches
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phosphoprotein.
-!- COFACIOR: Magnesium.
-!- SUBUNIT: Interactis with SH3GL2. Interaction appears to regulate MAPKA:mediated JUX activation (Fy similarity).
-!- ALTERNATIVE PRODUCTS:
                                                                                                                                                                                      Isoid-281088-3: Sequence-VSP_007053; No.ce-No experimental confirmation available; Italians Insula Specimental confirmation available; Italians Insula Specimental Confirmations of the Specimens and Tissue Examined, with this levels in floati, brain, placenta, skeleta; muscle, kidney and pancreas and lower levels in long and
                                                                                                                                                                                                                                                                                    SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES.
STE20 SUBPAMILY.
                                                                                           isold=Q@IV#8-1: Sequence-Displayed:
loce-No experimental confirmation available:
Name-2;
                                                                             Event-Alternative splicing; Named isotorms: 3;
                                                                                                                                                          Isold-C&IVH8-2; Sequence-VSP_007952;
                                                                                                                                                                                                                                                                                                                     SIMILARITY: Contains 1 CNH domain.
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EMBL; AF445385; AAN75849.1; U
EMBL; AF445386; AAN75849.1; U
EMBL; AF445387; AAN75849.1; U
EMBL; AF445388; AAN75849.1; U
EMBL; AF445389; AAN75849.1; U
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AF445392;
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AF445397;
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EMBL;
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EMBL;
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EMBL;
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EMBL;
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ATP (BY SIMILARITY).

RY SHILLARITY.

RY SIMILARITY.

KNPGFDLSRRNP -> MA (in isoform 2).

/FILd-VSP_007052.

Missing (in isoform 3).

/FILd-VSP_007053.

K->E: LOSS OF KINASE ACTIVITY AND ABILITY
TO ACTIVATE JUK PEMILY.

N -> D (IN REF. 1: AAC15472).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 PPPAAPQRVDST ---- UVHSSQASGQAVTVSRQPSLNAYNSLTRSGLKRTPSLKPDVPPKP 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19.7%; Score 74; DB 1; Length 894;
32.8%; Pred, No. 10;
tive 6; Mismatches 23; Indels 14; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Mat).
Eukarycta; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammaila; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09JKS5; C9JLT1.
28-FEB-2003 (Rel. 4), Last sequence update)
28-FEB-2003 (Rel. 4), Last sequence update)
Piccolo protein (Multidomain presynaptic cytomatrix protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISCFORM 2), AND INTERACTION WITH RABACI
                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam: PF00782 (CNH; 1. Prants).
Pfam: PF00782 (PK inase):
SMART: SM00305, CNH: 1.
SMART: SM00220: STKC: 1.
SMART: SM00120: STKC: 1.
PROSITE: PS00107 PROTEIN_KINASE_AIP; 1.
PROSITE: PS00108: PROTEIN_KINASE_OM; 1.
PROSITE: PS00108: PROTEIN_KINASE_DOM; 1.
ATP-binding: Transferase; Serine/threonine-protein kinase; Alternative Splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ... ... ... D (IN REF. 1: AAC15472).
101315 MW; 6EB77BBB34E5B733 CRC64:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5085 AA
Genew: EGNC.6965; MAD4K3.
MIN: 604921;
InterPro: IPR001169; Citron.
InterPro: IPR002199; Prot_kinase.
InterPro: IPR002290; Ser_thr_pxinase.
InterPro: IPR001245; TYr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chery Match
Hest Local Similarity 32.00
Thes 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              894 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  462 RLPP 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10116;
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between the Swiss institute of Stoinformalies and the EMBL outstation the European Bioinformatics Institute. There are no restructions on its use by non-profit institutions as lond as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a rollaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           :DA
                                                                                                                                                                                                                                                                                                                                       -- FUNCTION: May act as a scaffolding protein involved in the organization of synaptic active zones and in synaptic vestche trafficking (My similarity).
-- FUNCTION (My similarity).
-- SUBDITE Interacts with RebackProl and prefittin.
-- SUBCEDIUGAR EXCATION: Concentrated at prespuptic side of synaptic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ċ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GO; GO:0045202; C:synaptic junction; IDA.
GO: GO:0065509; F:calcium ion binding activity; IDA.
GO; GO:0065544; F:calcium dispendent phospholipid binding acti. . .; 1
GO; GO:005524; F:profilin oliding activity; ISS.
GO; GO:005522; F:profilin oliding activity; ISS.
GO; GO:0050500; F:cytoskeleton organization and biogenesis; ISS.
GO; GO:00600; P:cynaptic vestole margeting; NAS.
InterPro; IPRO01478; PQ2.
                 Ferster S.D., Chung W.J., Zhai R., Cases-Jandfoff C., Voss B.,
Garner A.M., Kaempf U., Kindler S., Gunderfinger E.D., Garner C.C.,
Piccolo, a presynaptic Zite finger protein structurally related to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 X 10 AA TANDEN AFPROXIMATE REFEATS PA-X-P-Q-P-Q (G-P-X, C4-TYPE (POTENLIAL), C4-TYPE (POTENLIAL),
                                                                                                                                                                                                                                                                   Gerber S.H., Garcia J., Rizo J., Suedhof 1.0.;
An unusual (C.)-domain in the active-zone protein piccolo:
implications for Ca(2.) requiation of neurotransmitter release.";
EMBG J. 20:1605-1619(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DORATN: C2 domain 1 is involved in binding culcium and phospholipids. Calcium binds with low afficity but with dispuspedificity and induces a large conformational change. SIMILARITY: Contains 2 C2 domains. SIMILARITY: Contains 1 PDZ/DUR domain.
                                                                                                                           SEQUENCE FROM N.A. (ISOFORM 1).
Fenster S.D., Cases-Langhoff C., Gundelfinger F.D., Garner C.C.,
Submitted (JAN-2000) to the EMBL/Genbank/SD3J datubuses.
                                                                                                                                                                                                 CALICUM-BINDING ACTIVITY, AND MUTAGENESTS OF ASP-4668; ASP-4674;
VAL-4688; MET-4689; VAL-4690; SER-4691; GLN-4692; ASN-4600 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam: PF60158, C2: 2.
Pfam: PF60158; C2: 2.
Pfam: PF60159; C2: 2.
SMART: SM00228; C2: 2.
PROSITE: P500499: C2_DCMAIN_I: 1.
PROSITE: P550104: C2_DONAIN_I: 2.
PROSITE: P550106: P02: 1.
Calctum/phospholipid-binding: Metal-binding: Zinc: Zinc-finger:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isold=09JKS6-2; Sequence-VSP_003930, VSP 003931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Event-Alternative splicing: Named isoforms+2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN 1.
DOMAIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ispid-09JKS6-1: Sequence-Displayed:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POLY - PRO.
MEDLINE 20170257; PubMcd-10707984;
                                                                                                                                                                                                                                                      MEDZINE-21181819: PubMed+11285225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PD2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AF138789; AAF07822.2; -. EMBL; AF227534; AAF63196.1; -. HSSP; P04410; 1A25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Repeat, Alternative splicing.
DOMAIN 372 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALTERNATIVE PRODUCTS:
                                                                                         Neuron 25:203-214(2006).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1033
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4752
5059
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1010
2351
4442
4653
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                                                                                                                                                                                                                                     ALA-4694.
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                              1 PPEAFURVISEOVISSOPSGOAVTVSROPSINAYNSIITRSGLKRTFSLKPUVPPKPSFAP 60
                                                                                                                                                                                                                                      ON->AA: MODERATE INCREASE IN AFFINITY FOR CALCIUM.
                                                                                                                                                                                                                  10-FOLD INCREASE IN AFFINITY FOR
                                                                                                                                                                         10-FOLD INCREASE IN AFFINITY FOR
                           Missing (in isoform 2).
/FTId-VSP_003931.
D->A: COMPLETE LOSS OF CALCIUM-BINDING
                                                                                                  D->A: COMPLETE LOSS OF CALCIGM-BINDING
AND CALCIUM-DEPENDENT PHOSPHOLIPID
                                                                                                                                                                                                      INCREASED AFFINITY FOR CALCIUM
                                                                                                                                           V->S: SMALL INCREASE IN AFFINITY FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

MEDILHE-882893595; tubmed-3349388;

MEDILHE-882893595; tubmed-349388;

Worth M.D., Boyer J.C., Hacnnl A.L.;

Worth M.D., Boyer J.C., Hacnnl A.L.;

Worth M.D., Boyer J.C., Hacnnl A.L.;

Sequesciong of turnip yellow mosaic virus genomic RNA.";

Nucleic Acids Res. 16:1557-6173(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vireses: SSRNA positive-strand viruses, no DNA stage; Tymovirus
NCSL_faxID-12:54;
                                                                        AND CALCIUM-DEPENDENT PHOSPHOLIPID
                                                                                                                                                                                                                                                                  A->S: NO REFECT ON CALCIUM-BINDING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - SIMILARITY: TO 65 TO 70 KDa PROTEIN FROM OTHER TYMOVIRUSES
                                                                                                                                                                                                                                                                                                                                  19.5%; Score 73.5; DB 1; Length 5085; 26.4%; Pred, No. 81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 628;
2)
                                                                                                                                                                                                                                                                                                                                                                 20; Indels
                                                                                                                                                                                                                                                                                                        5085 AA; 552702 XW; 5A1BB543201A7450 CRC64;
TKPTN -> SKRRK (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro: IPR004935; Tymo_45_70kDa.
Pfam: PF03251; Tymo_45kd_70kd: 1.
SEGUENCE 628 AA; 69195 MW; 9B0ICE5ADFCEAC77 CRC64;
                                                                                    BINDING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-1989 (Rel. 16, Created)
01-A02-1992 (Rel. 23, Last sequence update)
69-N03-1992 (Rel. 23, Last annotation update)
69-N0a protein.
               /FTId-VSP_003930
                                                                                                                              BINDING ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           628 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 72.5; Di
Pred. No. 9.8;
                                                                                                                                                                                                                                                                                                                                                                 8; Mismatches
                                                                                                                                                                          VM->SS: ]
                                                                                                                                                           CALCIUM.
                                                                                                                                                                                                                                 CALCIUM.
                                                                                                                                                                                                                    VV->SS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRI
                                                                                                                                                                                                      M->S:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL: X07441: CAA30321:1: ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.3%;
29.6%;
                                                                                                                                                                                                                                                                                                                                                  36.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Turnip yellow mosaic virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2468 :PVTTOKPTOTC 2479
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 LS-TSMKPNDAC 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                               4694
                                                                                                                                                                         4683
                                                                                                                                                                                                                    4691
                                                                                                                                                                                                                                                                           4694
                             5085
                                                        4668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        501955
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 19: Coosery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
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                                                                                                                                                                                                                                                                           4694
                                                                                                                                             4688
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                             4881
                                                        4668
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           V70K_TYMV
P10357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Guery Match
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VARSFLIC
                             VARSPLIC
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                                                          MUTAGEN
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                                                              2 PPADGRUDSIQVHSSOPSGQAVIVSROPSLNAYNSLITRSGLKREFF----SLRPDV-FPRE-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCESCUIAR LOCATION: Nuclear.
SIMILARITY: BELONGS TO THE BASIC HELLX-LOGE-HELLX (BELH) FAMILY OF
TRANSCRIPTION FACTORS, BHIH-LIF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION.

FUNCTION.

FORDTRIVE-ACTING TRANSCRIPTION FASTOR THAT BINDS TO THE IMMUNOSLOBULIN ENGLANCER WELL TO A STANDARD STAND WELL TO A USE/WITE SITE.

SUBUNIT: Efficient DNA binding requires diserization with another BHLE protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "mifE3, an x-linked transcr.ptional activator containing basic helix-
loop-helix and zipper domains, utilizes the zipper to stabilize both
DNA binding and miltimerization.";
Mol. Cell. Biol. 12:817-827[1992].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HELIX-LOOP-HELIX MOTIF (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRONG TRANSCRIPTION ACTIVATION DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE: PS00338: HUEL!: 1.
PKOSTTE: PS5388: HUEL!: 1.
Transcription regulation: DNA-pinding: Activator: Nuclear profetu.
NOW_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roman C., Matera A.G., Cooper C., Artandi S., Blain S., Ward D.C.,
Calame K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata: Vertebrata: Enteleostomi:
Sciuroquathi: Moridae: Murinae: Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.0%; Score 71.5; DB 1; Length 446; 34.4%; Pred. No. 8.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LEUCINE-ZIPPER (POTENTIAL). 79115373AD7F131E CRC64;
Tidels
14
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01-NOV-1997 (Rel. 35, Last Reguence update)
36-MAY-2600 (Rel. 39, Last unnotation update)
Transcription factor E3 (Fragment).
Mismatenes
                                                                                                                                                                                                                                                                                                                                                                                                                446 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PCTENTIAL).
BASIC DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=92123207; PubMed=1732746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR) 442029; 442229.
HSSP; P36956; 14M9.
MGD; MGI:98511; Tcfe3;
interPro; IPR001092; HIM_Dasic.
Fram; PFC0010; HIM: 1.
SMART: SM00353; HIM: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47891 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota: Netazoa: Chordata;
Mammalia: Eutheria: Rodentia;
                                                                                                                          119 PPAPQRQHSLPLHITRPS
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21: Conservative
                                                                                                                                                                                                                                                 155 DHGPVLIETKP 165
                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD:
                                                                                                                                                                                     S7 SFAPESTSMKP 67
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1 PPPA--PQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLJRSGLKRTPSLKPDVPPKPSF 53

Mismatches

Conservative

Matches

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its most by non-profit, institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license directed to the statement of see the statement of seen and seed the statement of seen and seed the statement of seen and seed the statement of seen and seed and seed the seed and seed an email to inconselishesh.
40 PPPAQVPREVLKVOTHENPTRYHLQQARRQCVXQYESTILGPKLASGALTP--PPGPSS 97
                                                                                                                                                                                                                                                                                                                                                                                                                                          of the kerathnocyte cornified envelope.:
J. Biol. Chem. 273:13154(1998).
in the cornified envelope. The LIM domain may be involved in homorpyic or heterotypic associations and may function to localize scialin to the cornified envelope. The LIM domain may be involved in homorpyic or heterotypic associations and may function to localize scialin to the cornified envelope.
SUBCELUGAR LOCATION: Cytopiasmic. May become cross-linked to membrane proteins by transglutaminasse.
TISSUE SPECIFICITY: Highly expressed in esophagus. It is also expressed in keratinocytes, amniotic tissue, foreskin stratum spinosum and stratum: granulosum, hair follicle and nail.
                                                                                                                                                                                                                                                                                                                                                                               TISSUB-Foreskin;
MEDILDE-99030435; PubMed-9813070;
Champliand M.-F., Burgeson R.E., Jin W., Baden H.P., Olson P.F.;
"CDNA cloning and characterization of sciellin, a LIM domain protein
                                                                                                                                                                                                                                                                                Homo sapiens (Human).
Eŭkaryota, Metazoa: Cherdata, Craniana, Vertebrata; Buteleostomi;
Marmalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16 X APPROXIMATE TANDEM REPEATS
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MIK. 694122: -..
GD: GD: 5005732: -..
GD: GC: 6006544: P: opidermal differentiation: TAS.
GD: GC: 6006544: P: opidermal differentiation: TAS.
The APIG: TPR00178:: 52M.
                                                                                                                                                                                            28-FEB-2003 (Rei. 41. Created)
28-FEB-2003 (Rei. 41. Last sequence update)
28-FEB-2003 (Rei. 41. Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE: PSGG478: LIM NUMBIN.]; FALSE_NEG.
PRESITE; PSSGG23: LIM NUMBIN.2: 1.
LIM domain: Motal binding; Sinc; Repeat.
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                                                                                                                                                               STANDARD
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                                           59 A-Pt 61
                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
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095171:
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TISSTELLING, and Lymphia.

X REDINE-22388257; Pubmod=12477532;

X Strausher R.D., Pelmodid E.A., Grouse L.H., Dorne J.G.,

K Ridgmer R.D., Collins F.S., Wagner L., Schaefer C.F., Brat N.K.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Brat N.K.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Brat N.K.,

A Altschul S.F., Jordan H., Moure J.M., Rubhin G.M., Hong L.,

Didtchenko L., Marusland K., Parmer A.A., Rubhin G.M., Hong L.,

Stapleton M.J., Gadin T.B., Toshiyuki S.J.,

A Brownstein M.J., Usdin T.B., Toshiyuki S.J., Marisch P., Prange C.,

A Raba S.S., Loquoliano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Robards S.M., McDwan P.J., McKernan K.J., Malek J.A., Guzararne F.H.,

A Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Richards S., Morley K.C., Shevchenko Y., Bodfards B.A.,

A Richards S., Morley K., Soderger E.J., Ju. X., Gibbs R.A.,

A Richards S., Morley K., Soderger E.J., Ju. X., Gibbs R.A.,

A Richards S., Morley K., Soderger E.J., Ju. X., Gibbs R.A.,

A Richards S., Morley K., Soderger E.J., Ju. X., Gibbs R.A.,

A Richards S., Stimwood J., Schwuchenko Y., Bodfard G.G.,

A Rodriguez A.C., Stimwood J., Schwut, J., Myers N.A.,

B Rutkerfield Y.S.N., Krzywinski M.J., Skalska J., Smailus D.E.,

Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                      10 SIQVHSSQPSGQ------AVTVSRQ----PSLNAYNSLTFSGL-KRTPSL 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gunster K.J., Satijn D.P., Hamer K.M., den Blaauwen J.E., de Bruijn D., Alkema M.J., van Lohuizen M., van Briel B., Otte A.F., "identification and characterization of interactions between the vertebrate polycomb-group protein BKII and human homologs of polyhomeotic.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
-!- FUNCTION: Involved in the requiation of Hox sene expression and segment specification during paraxial mesoderm and neural cres.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., SUBCELLUIAR LOCATION, AND INTERACTION WITH BHILL
                                                                                                                                                                                                                                                                                                                                                                                                             PHCL_HUMAN STANDARD: PRT; 1004 AA.
P78364: OBNYM3: O9HUE3:
28-PER-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 42, Last segment update)
15-SEP-2003 (Rel. 42, Last annotation update)
Polybomeotic-like protein 1 (Early development requestor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Bukaryota, Metarca; Chordata: Graniata; Verfebrata; Eufelessioni:
Mammalia; Butheria; Primales; Catarrhin; Pominidae; Hono.
                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19.0%; Score 71.5; DB 1; Length 668; 30.0%; Pred. No. 13;
                                                                                                                                                          Indels
                                                                              612BC3686DBA9FBC CRC64;
                                                                                                                                                        20:
                                                                                                                                                        11: Mismatches
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                                                                                                                                                                                                                                                                                                  187 HPPIPPKPS-SPVSS---PN 202
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    49 KPDVPPKPSFAPLSTSMKPN 58
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AA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 PPAPQAVDSIQVESSOPSGQAVIVSRQPSLNAYNSLIRSGLKRIP-SLKPDVPPKPSPAP 60
                                                                                                                                                                                                                           PROSITE; PSEC165; SAM_BCMAIN; 1.
Developmental protein; DNA-binding; Nuclear protein; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                            15;
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                                                                                                                                                  MIM) 602978; -.
60; 60:0065634; C:nucleus; TAS.
60; G0:006515; Piprotein binding activity; TAS.
InterPro: IPR06:660; SAM.
Pfan: PP00536; SAM; SAM.
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                                                                                                                                                                                                                                                                                                                                                                                                    19.0%; Score 71.5;
35.8%; Pred. No. 21
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                                                                                                              EMBL; BC002871; AAH02871.1; ALT_INIT.
EMBL; BC017748; AAH17748.1; ALT_INIT.
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Search completed: September 30, 2003, 16:33:00 Job time : 40 secs us-09-856-681-4.rspt

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September 30, 2003, 16:19:53 : Search time 69 Seconds (Withou: alignments) 269:272 Million cell updates/sec
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GenCore version 5.1.5
Copyright (c) 1993 - 2003 Compuges Ltd.
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Maximum Match 130%
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLIRSGLKRTPSLKPDVPPKPSFAP 60

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61 LSTSMKPNDACT 72

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A Madalashi M., Chiba W., Kaku Y., Kodaira H., Kondo H., Takiguchi S.,
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Hypothetical protein FLZ14535.
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A Takahashi M., Chiba Y., Ishda S., Murakawa K., Ono Y., Takiquchi S.,
A Watanabe S., Kimura K., Murakawa K., Ono Y., Takiquchi S.,
A Watanabe S., Kimura K., Murakawa K., Ono Y., Takiquchi S.,
A Wamamoto J., Makamatsu A., Nakamura Y., Nagahari K., Kashio Y.,
A Ninoniya K., Iwayanagi T.,
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Bubi Ak0427; Psi Sii Mik; Sab3655AD1DD78A CRC64;
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SEQUENCE 562 AA, 61286 MW, 708041459E34078A GRCE4;
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Bukaryota: Motazoa: Coordata: Craniata; Vertehrata: Eurelons:Omi:
Mammalia: Eutheria: Primatos: Catarrhini; Hominidae: Homo.
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Mammalia; Eutheria; Primates: Gatarrhini; Hominidae; Hose.
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100.3%; Score 375; 38 4; Length 552;
Best Local Similarity 100.0%; Pred, No. 6.3e-33;
Matches 72; Conservative 3; Mismatches 0; Indels (
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01-DEC-2001 (TrEMBLRel. 19, Greated)
01-DEC-2001 (TrEMBLRel. 19, Last. Sequence Lipustrel)
01-MAR-2003 (TrEMBLRel. 23, Last annotation update)
Hypothetical protein FG714565.
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01-0cT-2002 (TrBMBLrel, 22, Dast sequence update)
01-0cT-2002 (TrBMBLrel, 22, Last annotation update)
Mypothetical protein FL090494.
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496 LSISMKPNDACT 507
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01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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Matches 72; Conservative
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SMART; SM06423; PSI; 1.
SMART; SM06530; Scma: 1.
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SMART; SM0C423; PS1; :..
SMART; SM0C630; Sema; 1.
                            Homo sapiens (Human).
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              Semaphorin SEMASAl
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MEDLINE=20564339; PubMed-10993894;
MEDLINE=20564339; PubMed-10993894;
MIOSTERMAGN LAIZ B., Gertler F., Behl C.;
The orthologous human and murine semaphoric 6A-1 proteins (SEMAGA-1/Sema6A-1) bind to the Enabled/Vasodilator-stimulated Phosphoprotein like protein (BVI) via a novel carboxyl-terminal Zyxin-like domadn.";
J. Biol. Chem. 275:39647:39653(2000),
MGD: MGI:1203227; Sema6a.;
                                                                                                                                                                 1 PPPAPQRVDSTOVHSSQFSGQAVTVSROPSINAYNSIIRSGLKHIFSLKFDVPFKPSFAR
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Eukaryota: Motazoa, Chordata, Craniata; Vartebrata: Eureleostomi:
Manmalia; Eutheria; Rodentia; Sciurogratii: Muridae; Muridae; Mis
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                                                                                                                     Length 693,
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AA: 111758 MW: 578699277458079D CRC64;
"NEDO human CDNA sequencing project.";
Submitted (MAY-2001) to the EMBL/Genhank/DDBJ databases.
EMBL; AK027501; BAB551581: -.
InterPro; IPR003659; Ploxin-like.
InterPro; IPR001627; Sema.
                                                                                 Hypothetical protein.
SEGUENCE 699 AA; 76723 MW; 2E5F111D59741394 CRC64;
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01-MAR-2001 (InfMHDrel. 16. Last sequence update)
01-MAR-2003 (TrEMHDrel. 23. Dast annotation update)
Axor quidance signal SEMA6A1.
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
                                                                                                                   100.09; Score 376; DB 4;
100.04; Pred. No. 3.1e-33;
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InterPro/ IPR001627; Sema.
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Host Local Similarity 106.0
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Matches 72; Conservative
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                                                          Pfam; PF01403; Scma; 1.
SMART; SM00423; PSI; 1.
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SMART; SM00423; PSI; 1
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MEDLINES_2066439; bubMed=10993894;
MEDLINES_20664339; bubMed=10993894;
Kiosternann A., Litz B., Gertler F., Behl C.;
The orthologous human and murine semaphoriu 6A-1 proteins (SEMA6A-1/Sema6A-1) bind to the Enabled/Vasodilator-stimulated Phosphoprotein-1/Sema6A-1; bind to the Enabled/Vasodilator-stimulated Phosphoprotein-1/Sep Protein (EVL) via a novel carboxyl-terminal zyxin-like domain.";
J. Biol. Chem. 275:39647-39653(2000).
J. Biol. Chem. 275:39647-39653(2000).
Interpro: IPR001553; Sema.
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MEDLINE=2018,1126; PubMed-10718196;
Nagase T., Kikuno R., Ishikawa K., Hirosawa M., Chara C.,
Nagase T., Kikuno R., Ishikawa K., Hirosawa M., Chara C.,
Prediction of the coding sequences of unidentified human genes.XVI.
The complete sequences of 150 new cDNA clones from brain which code
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaila; Eutheria: Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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100.0%; Pred. No. 1.3e-32;
ive 0; Mismatches 0; Indels 0
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100.0%; Pred. No. 1.3e-32;
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DNA Res. 7:65-73(2000).

EMBL; ABG37789; BAA92606.1; -.

GENEW: HSMC:10738; SEMAGA.

Interpro: IPR603659; Plexin-like.

Interpro: IPR001627; Soma.
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PRI;
Query Match
Bost Local Similarity 50,7%;
Matches 37; Conservative
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Best Local Similarity 50., s
Thos 37; Conservative
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                                                                                                                                                                                                                                                                                                                 55 KPSFAPLSTSMKF 67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9506:
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TISSUE-Medulla cblongata;

TISSUE-Medulla cblongata;

TISSUE-Medulla cblongata;

TISSUE-Medulla cblongata;

TISSUE N. Hidda M., Kusuda J., Tanuma R., Iscki K., Hirai M., Terao K.,

Suzuki Y., Sugano S., Hashimoto K.;

Isolation of full length cbNA clones from macaque brain cDNA

Libraties. "
Submitted (JUN-2001) to the EMBL/GenBank/DDRJ databases.

Submitted (JUN-2001) to the EMBL/GenBank/DDRJ databases.

EMBL, AB063027; BAB60770.1; -.

Hypotherical protein.

SEQUENCE 416 AA: 45771 MW; C84BE67ECZF69EZB CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                Operation (TERMITE) 19. Created)
01-DEC-2001 (TERMITE) 19. Last sequence update)
01-DEC-2001 (TERMITE) 19. Last annotation update)
01-DEC-2001 (TERMITE) 19. Last annotation update)
Hypothetical 45.8 kDa protecn.
Macaca fascicularis (Crab exting macaque) (Cycosolus monkey).
Eukaryota, Metazoa (Cycordau, Craniala, Vertebrata Euteleusiom).
Mammalia, Eutheria, Primates; Catarrhini, Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Graniata, Vertobrata, Eutokostomi:
Mammalia: Euthoria, Primates: Catarrini, Hominidae: Hono.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43.5%; Score 163.5; DB 6; Length 416: 50.7%; Pred, No. 8.6e*15;
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01-MAR-2001 (Trambirel, 16, Last sequence update)
10-OCT-2002 (Trambirel, 22, Last annotation update)
Hypothetical protein Fill2685,
Homo saplens (Human).
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                                                                                                                                                    1038 LSTSMKPNDACI 1049
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Matches 37: Conservative
                                                                                                               61 LSTSMKPNDACT 72
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                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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7958A6
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                                                                                                     1 PPPAPQRVDSIQVHSSQPSGQAVIVSRQPSLNAYNSLI-----RSGLKRIPSLKPDVPP 54
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Qu X., Zhai Y., Wei H., Yu Y., Tang F., He P.;
Qu X., Zhai Y., Wei H., Yu Y., Tang F., He P.;
Hichmo suplens semaphorin for isoform 2 (SEMA6D.2) mRNA, complete cds.";
Submitted (UCN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL: AF386427; AAM69450.1: -...
                                                  Gaps
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Bukaryota, Motazoa: Chordata, Craniata, Vertobrata, Euteleostomi;
Mammalia: Eutheria: Frimates: Catarrhini: Bominidae: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isoqui T., Ota T., Hayashi K., Suqiyama T., Otsuki T., Suzuki Y., Nishikawa T., Madai K., Sugino S., Takabashi-Fuji A., Hara H., Tankawa T., Madai K., Sugino S., Komai F., Hara R., Tankeuchi K., Arita M., Nabekura T., Ishii S., Kawai Y., Saito K., Yamamoto J., Maxamatus A., Nakamura Y., Nagahari K., Masuho Y., Oshima A.; Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases. Hypothetical protein.

Submitted (AUG-2010) to the EMBL/GenBank/DDBJ databases. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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  Length 451:
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01-MAR-2001 (TYEMBLER). 15. Last sequence update)
01-037-2002 (TYEMBLER). 22. Last annotation update)
Hypothetical protein FL312769.
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01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
1-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Semaphorin 60 isoform 2.
                                                  15:
Score 163.5; DB 4;
Pred. No. 9.4e-10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-Brain,
Ou X., Wei H., Zhai Y., Yu V., Tang F., He F.)
Ou San, Wei H., Zhai Y., Yu V., Tang F., He F.)
"Homo sapiens semaphorin 60 isoform 3 (SEMAÑEL3) when complete cds.";
Submitted (JUN-2001) to the EMBL/GenBank/DDDE databases.
                                                                                                                                                         1 PPPAPQRVDSIQVHSSQFSGQAVTVSRQPSLNAYNSLT-----RSGLKRTPSLKPDVPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.5%; Score 163.5; EB 4; Length 1011;
50.7%; Pred. No. 2.4e-09;
Live 8; Mismatches 15; Indeis 15; Caps
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Warayota Metazoa, Cherdata, Craniata, Vertebrata, Eutoleostomi, Mammalia, Eutheria: Primates; Catarrhini: Hominidae, Homo, NCBI_TaxID=9606;
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Mammalia: Eutheria: Primates: Catarrhin!; Hominidae; Homo.
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SMART; SMCC630; Sema; 1.
SEQUENCE 998 AA; 111730 MW; 3F46D6872E9D5344 CRC64;
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993 KPSEVPQIPSVRP 1005
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980 KPSEVPCTPSVRP 992
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Matches 37; Conservative
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                                                                                       Local Similarity 50.7 nes 37, Conservative
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MEDINE-2027/182; PUDMED-10819331;
MEDINE-2027/182; PUDMED-10819331;
MEDISTOR F. Lishikawa K., Hirosawa M., Ohara O.;
Prediction of the coding sequences of unidentified human genes XVVI.The complete sequences of 100 new cDNA closes from brain which code for integeproteins in vitro.";
NAM ROS. 77443-150(2000).
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Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                  43.5%; Score 163.5; DB 4; Length 1017; 50.7%; Pred. No. 2.4e-05; Live 8; Mismatches 15; Indeis 13;
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EMBL; AF385428; AAM69451.1; ..
TriterPro; IPR001627; Sema.
Prfam; PF01403; Sema; 1.
SMART: SW00639; Sema; 1.
SEQUENCE 1017 Aa: 113736 MW; 4D639CEBADD9F2A0 CRC64;
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InterPro; IPR003659; Piexin-like.
InterPro; IPR001627; Sema.
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Bost Local Similarity 50.73
Matches 37; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PREDININARY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 compuget Ltd.
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OM protein - protein search, using sw model

September 30, 2003, 16:31:08 : Search time 42 Seconds (Without alignments) 72:533 Million cell updates/sec Run on:

US-09-856-681-4 376 i PPPAPQRVDSIQVHSSQPSG......PFKPSFAPLSTSMKPNDACF 72 Title: Perfect score: Sequence:

328717 segs, 42310858 residues BLOSCM62 Gapop 10.0 , Gapext 0.5 Scoring table: Searched:

Misimum DB seq length: 0 Maximum DB seq length: 200000000

Total number of hits satisfying chosen parameters:

Listing first 45 summarres Maximum Match 100% Post-processing: Minimum Match 0%

Database :

Issued_Patents_AA:*

/cqn2_6/ptodata/l/iaa/5A_CCM6.pep:*
/cqn2_6/ptodata/l/iaa/5A_CCM6.pep:*
/cqn2_6/ptodata/l/iaa/6A_CCM6.pep:*
/cqn2_6/ptodata/l/iaa/6A_CCM6.pep:*
/cqn2_6/ptodata/l/iaa/PCTUS_CCM6.pep:*
/cqn2_6/ptodata/l/iaa/PCTUS_CCM6.pep:*

Pred. No. is the number of results predicted by clance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		æ			SUMMARIES	
Result No.	Score	Query Match	Query Match Length	DB	116	Description
-	7.2	1.6.1	480	œ	US-09-189-035-5	.canence 5,
2	72	9	490	:*)	US-09-382-086-5	S.
٣	٦.		1004	۲Ŧ;	US-08-916-352-2	equence 2,
4	69.5	18.5	1125	•	US-09-513-783A-152	120
'n	9.	18.5	1610	٠,٠	US-09-513-783A-22	e 22,
9	9		400	~;	US-09-252-991A-32313	7
7	58.5	18.2	625	-;	US-09-196-270-6	vc.
හ	68		1149	m	US-08-560-005-5	'n
σ	68	ω. αυ	1149	m	US-09-418-540-5	wì
10	68		1149	4	13-03-969-528-5	
11	99		1253	-	US-08-252-956B-12	
12	58		1261	-	US-08-252-966B-18	
13	67		169	77	US-09-252-991A-30563	
14	49	-	2035	-	US-08-046-585-5	
15	67	۲.	2035	-	US-08-393-703-5	
16	67		2035	es.		
17	ĸ.	ζ.	167	-7		
18	65.5		366	₹	US-09-252-991A-32385	Sequence 52385, A
19	'n	~	1142	7		
20	ĸ.		1142	~	US-08-845-528C-7	
21	ı.		1142	~	US-09-061-709-2	
22	Ċ.	۲.	1142	*7	-0	
23	'n.	7	1142		US-09-899-651-2	
24	ď.	17.4	1297	'n	US-09-540-245A-17	
25	65		7.0	*7*	-09-006-428A-1	
56	63 63 63 63 63 63 63 63 63 63 63 63 63 6		143	₹.5	-09-252-991A	
27	65		351	(F)	466-	

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US-09-046-158A-2 US-07-960-389-2 US-09-442-100-2 US-09-442-100-2 US-09-4613-857-13 US-09-613-857-13 US-09-071-035-450 US-09-071-035-450 US-09-071-035-450 US-09-071-035-450 US-09-252-991A-3294 US-09-252-991A-3294 US-08-885-291-53 US-08-885-291-53 US-09-456-693A-53 US-09-456-664A-3	US-09-403-343B-22
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ALIGNMENTS

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APPLICANT: Yee, Henry
APPLICANT: COCICY, Neil C.
APPLICANT: Guedier, Neil C.
APPLICANT: Guedier, Neil C.
APPLICANT: Baugin, Mariah R.
IIILE OF INVENTION: CYTOKINE SIGNAL REGULATORS
FILE OF INVENTION: CYTOKINE SIGNAL REGULATORS
CURRENT APPLICATION NUMBER: US/09/189,035
CURRENT APPLICATION NUMBER: US/09/189,035
CURRENT APPLICATION NUMBER: US/09/189,035
SOFTWARE: PERI, Frogram
SEG ID NO 5

LEMOTH: 460
                                              Sequence 5, Application US/09189035
Patent No. 6020165
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THER INFORMATION: 92245671
                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
RESULT 1
BS-09-189-035-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-189-035-5
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                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
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Gaps 14; 19.1%; Score 72; DB 3; Length 480; 31.2%; Pred. No. 4.8; tive 13; Mismatches 26; Indels Best Local Similarity 31.29 Matches 24, Conservative 1 PPFAPQRVUSIQVHSSOPSGQAVTVSROPSLNAYNSLTRS----GLKRIPSL-----KP 50

320 HVNGGPLYSONSISIAP 336 51 DVPPKPSFAPLSTSMKP 67 a Š 岩

RESULT 2 US-09-382-086-5 : Sequence 5. Application US/09382086 : Patent No. 6201106

GENERAL INFORMATION:
APPLICANT: Yue, Henry
APPLICANT: Corley, Neil C.
APPLICANT: Guegler, Karl J.
APPLICANT: Buughn, Marlaf R.
ITLE DE INVENTION: CYTOKINE SIGNAL REGULATORS
FILE REFERENCE: PF-0638 US
CORRENT APPLICATION NUMBER: US/09/382,086
CURRENT FILING DATE: 1999-08-24
FARLIER APPLICATION NUMBER: 09/189,035

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18.5%; Score 69.5; I 28.6%; Pred. No. 26;
                                                                                                                                  Sequence 152, Application US/09513783A Patent No. 5416959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                 Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                           Guory Match
Sest Local Similarity 28.0%
Sest Local 18, Conservative
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Sest Local Similarity 28.6%
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                       : ORGANISM: Mus musculus
US-09-513-783A-152
                                          494 IPIQSKP SCC
     61 LSTSMKP 67
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676 ATT 678
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922 ATI 924
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                                                                                              PESTUT 4
US-09-513-783A-152
                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 152
LENGTH: 1125
                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                   SOFTWARE:
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                                                                                                                                                                                                                                                                           1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLTKS-----GLKRTPSL-----KP
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                                                                                                                                                                                                                                          Indels 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 6166191
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: CHINON CORPORATION
TITLE OF INVENTION: HUMAN FOLVHOMBOTIC 1 (hph.1) ACTS AS A TITLE OF INVENTION: TUMOR SUPPRESSOR
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSES: ADDRESSES:
ADDRESSES: ADDRESSES:
CREET: 4560 HORTON SPREET
CITY: REMYVILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
19.0%: Score 71.5; DB 5: Longth 1004;
Best Local Similarity 35.8%; Pred. No. 14;
Matches 24; Conservative 5; Mismatches 23; Indols 15
                                                                                                                                                                                                      Ouery Match
Best Local Similarity 31.2%; Prod. No. 4.8;
Matches 24; Conservative 3; Mismatches 26; Indo.s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94608

COMPUTER READMELF FORK:
MEDIUT TYPE: Floppy disk
COMPUTER: THM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release F1.0, Version #1.37
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/316,352
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
ATORNEY/AGENT INFORMATION:
NAME: FOTTER, JANE
REGISTRATION NUMBER: 33,332
REFERENCE/FOCKET NUMBER: 1355
TELECOMMULICATION INFORMATION:
TELECHAN: 510-655-3542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/08916352
Patent No. 6166191
                                                                                                                                                                                                                                                                                                                                                                                   320 HVNGGPLYSONSISIAP :36
MARZIER FINANG DAIN: 1938 IN-10
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PERL Program
                                                                                                                                                                                                                                                                                                                                                51 DVPPKPSFAPLSTSMKP (7
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                                                                                                                                          ) OTHER INFORMATION: 92245671
US-09-382-086-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 510-655-5542
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sing.e
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) MOLECULE TYPE: protein
US-08-916-352-2
                                                                                                           ORGANISM: Homo sapiens
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                                                       SEC ID NO 5
LENGTH: 48
                                                                                              TYPE: PRI
                                                                                                                                  FEATURE:
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616 PSPLENT.EQKETPGSQPSEPCSGVSRQEEAKAAVGVTGNDITTPPNKEPPPSPEKKAKPL 675
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Live [3: Mismatches 31; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 1125;
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US-09-513-783A-22
Sequence 22, Application US/09513783A
Patent No. 6416959
GENERAL INFORMATION:
APPLICANT: Giuliano, Kenneth A.
APPLICANT: Giuliano, Kenneth A.
APPLICANT: Giuliano, Kenneth A.
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APPLI
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GENERAL INFORMATION:
AFPLICANT: Giuliano, Kenneth A.
AFPLICANT: Giuliano, Kenneth A.
AFPLICANT: Kapur, Ravi
TITLE OF INVENTION: A System for Cell Based Screening
Film Reperroc: 97-022-13
CURRENT AFFLICATION NUMBER: US/09/513,783A
CURRENT FILMS DATE: 2000-02-25
NUMBER OF SEQ ID NOS: 180
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CHER INFORMATION: EYER-DEVD-MAP4-EBFP construct
US-39-513-783A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13; Mismatches
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US-09-252-931A-32313

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380 PPAPPHAAPREEPLTPRLKPEGAPEPEGVAAPPPKNSFNNPAYYVLEGVPHQLLPPEPPS 939
                                                                                                  GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Poct, South Anne Bennet.
APPLICANT: Majerus, Philip W.
TITLE OF INVENTION: No. 6021354el Grb2 Associating Frotein and Nucleic TITLE OF INVENTION: No. 6021354el Grb2 Associating Frotein and Nucleic TITLE OF INVENTION: Acids Encoding Therefor NUMBER OF SECURNCES: 10 CCHRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Grew
STREET: One Market Plaza, Steuart Iower, Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Pot, David A.
APPLICANT: Williams, Lawis T.
APPLICANT: Williams, Lawis T.
APPLICANT: Majerus, Philip W.
TITLE OF INVENTION: No. 6296848el Grbz Associating Protein and Nucleic
NUMBER OF SECHENCES: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 FPAPORV - - DSIQVHSSQPSG - - OAVIVSRQPSLNAYNSLIRSGLKRIP - SLKPDVPPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3; Length 1149;
40;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER NEADABLE FORM:
MEDIUM TYPE: #Coppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PARAMETER: PC-FGS/MS-DCS
SOFTWARE: PARAMETER: PC-FGS/MS-DCS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/C8/560,005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18.1%; Score 68; DB 29.9%; Pred. No. 40; tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 2307K-0624000
TELECOMMUNICATION INFORMATION:
TELECHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : NANE/KEY: Region
: COCATION: 1..1149
: OTHER INFORMATION: /note= "51c"
!S-68-560-005-5
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                                                     Sequence 5, Application US/08560005
Patent No. 6001354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
ATTOWNEY AGENT INFORMATION:
MAMB: DOW, KATER P.
REGISTRATION NUMBER: 25,684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          940 PARAPVPSATKNKVALT 956
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1149 amine acids
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Host Socal Similarity 29.9%
Matches 23; Consorvative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                      CIIY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amine acid
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                94105
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                             S-500-095-80-SD
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                                        APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS TITLE OF INVENTION: AERUGINGSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02.18
PRIOR FILING DATE: 1998-02-18
PRIOR FILING SATE: 1998-02-18
PRIOR FILING DATE: 1998-07-27
NUMBER OF SECIENCES AND ACID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418 PPNAPS-YOSVOGOSSISATANTATYVPVRLAXYPTGPSIJEHLPPJHSNTAGGVFWRCS 476
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL NO DECORDS

APPLICANT: Hecht, Peter
APPLICANT: Eacht, Peter
APPLICANT: Eacht, Peter
APPLICANT: Eacht, Gerald
TILLE OF INVENTION: CHIMERIC PRE-ACTIVATED TRANSCRIPTION
FILLE REPERENCE: 50078,0c4002
CURRENT APPLICATION NUMBER: 65/09/196,275
CURRENT APPLICATION NUMBER: 66/066,129
EARLIER FILING DATE: 1997-11-19
EARLIER FILING DATE: 1997-11-21
EARLIER FILING NATE: 1997-11-24
NUMBER OF SEQ ID NOS: 24
SOFTWARE: FASTER (INS) 24
SOFTWARE: FASTER (INS) 24
SOFTWARE: FASTER (INS) 24
SOFTWARE: FASTER (INS) 24
SOFTWARE: FASTER (INS) 24
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Sequence 32313, Application US/09252991A
Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      166 NRPOFPPATSESPMS---KFDPA 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48 LKPDVPPKPSFAPLSTSMKPNDA 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRI
ORGANISM: Saccharomyces cercvislae
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Patent No. 6500636
                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRI
ORGANISM: Pseudomonas acruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 25.8
Matches 31; Conservative
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                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 32313
LENGTH: 400
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US-09-196-270-6
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFIWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DWRFR: US/09/969,528
                                                                                                                                                                                                                 NAME: Dow. Karen B.
RRGISTRATION NUMBER: 29,684
REFERENCE/DCCKET NUMBER: 2307K-0624000
TELECOMMUNICATION INFORMATION:
TELETHONE: 415-326 2430
INFORMATION FOR SED: 10, NO: 5: SEQUENCE CHARACTERISTICS:
LENGTH: 1149 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18.18; Score 68; DB 29.98; Pred. No. 40; tive 12; Mismatches
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                                                                                                                                                 APPLICATION WMBER: 08/550,005
FILING DATE: «URKNOWN»
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEC ID NO: 5: (18-09-969-528-5
                                                                                        FILING DATE: 01-05t-2001
CLASSIFICATION: <UNKNOWN>
FRIOR APPLICAPION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
CCMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DGS/MS-DGS
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LOCATION: 1.1149
CIEER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 29,98
Matches 23; Conservative
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MEDIUM TYPE: Floppy
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TITUE OF INVENTION: No. 6472197el Grb2 Associating Protein and Michele
Acids Encoding Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             880 PPAPPRAAPREEDLIPRIKPEGAPEFGVAAPFPKNSFNNPAYYVI EGVPHOLLPPEPPS 999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36; Indels
                  ADDRESSEE: Townsend and lownsend man also 2000 STREET: One Market Plaza. Stenart Tower, Suite 2000
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CORRESPONDENCE ADDRESS:
ADDRESSER: Townsend and Townsend and Crew
                                                                                                                                                                      MEDIUM TYPE: Ficppy disk
OCMBUTER: HHW PC Comparints
OCMBUTER: HHW PC Comparints
OCMBUTER: HW PC Comparints
SOFTWARE: Patenti: Release 41.0, Version 41.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/209/418,540
                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/560,605
FILING DEE: 17-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
REJISTRATION NUMBER: 29,684
REFERENCE/FOCKET NUMBER: 2307K-0624000
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
18.1%; Score 68; DB 3
Best Local Similarity 29.9%; Pred; No. 40;
Matches 23; Consorvative i2; Mismatches
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COMPUTER: IBM PC compatible
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56 PSFAPLSTSMKPNDACT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 415-326-2422
INFORMATION FOR SEQ 1D NO: S:
SEQUENCE CHARACTERISTICS:
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STATE: California
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1149 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                           STREET: One Market P
CITY: San Francisco
STATE: California
                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 94105
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: LOCATION: 1..1149
: OTHER INFORMATION:
US-09-418-540-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
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                                                                                                             USA
                                                                                                                               94105
                                                                                                          COUNTRY:
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880 PPAPPRAAPREEPLTPRLKPEGAPEPEGVAAPPPKNSFNNPAYYVLEGVPHQLLPPEPPS 939
                                                                                                                      2 PPAPQKV---DSIQVHSSQPSG--QAVIVSRQPSLNAYNSLITRSGLKRTP-SLKPDVPPK 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Christensen, O'Connor, Johnson, and KindnessPLLC
STREET: 1426 Fifth Ave., Suite 2800
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/06252966B
Patent No. 5624818
GENERAL INFORMATION:
APPLICANT: Elsenman, Robert N.
APPLICANT: Harlin, Peter J.
APPLICANT: Ayer, Condid E.
TILLE OF INVENTION: Regulatory Proteins that Dimerize with
TILLE OF ENVENTION: Mad or Max
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Christensen, O'Connor, Johnson, and Kindnesspill
DB 4; Length 1149; 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/252,965B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAME: Shelton, Dennis K.
REGISTRATION NUMBER: 26,997.
REFERENCE/DOCKET NUMBER: FHCR17694
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                                                              Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                 US-09-252-991A-30563
      ) ORGANISM:
US-08-252-9568-18
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APPLICANT:
APPLICANT:
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US-08-046-585-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY:
STATE:
                                                                                                    Matches
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                                                                                                                                                                                                                                                                                                                                                                                      1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPS--LNAYNSLTRSSLKRTPSLKPDVPPKPSF
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: Christensen, J'Concor, Johnson, and Kindnesspill
1420 Fifth Ave., Suite 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECCIE TYPE: protein
DESCRIPTION: translation of msina9 cDNA; see Figure 29A, 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATICN:
APPLICANT: Elsenman, Robert N.
APPLICANT: Hurlin, Peter J.
APPLICANT: Aver, Donald F.
TITLE OF INVENTION: Regulatory Proteins that Discrize with
TITLE OF INVENTION: Mad or Max
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                           18.1%; Score 68; DB I; Length 1253; 30.7%; Pred. No. 44;
                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: protein DESCRIPTION: translation of msina cDNA: see Figure 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCENAILS SIGNET FUNDAMENT DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/03/252,965B FILING DATE: UD-JUN-1994 CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FHCR: 7594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDLUM TYPE: Flopey disk
COMPUTER: TBM PC compatible
OPERATING SYSTEM: PC-50S/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 18, Application US/082529668 Patent No. 5624818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26,397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/OOCKET NUMBER: FRI
TELECORMUNICATION INFORMATION:
TELEPHONE: (206) 224-0779
INFORMATION FOR SEQ ID NO: 18:
TELECOMMUNICATION INFORMATION:
              TELEPHONE: (206) 682-8100
TELERAX: (206) 224-0779
INFORMATION FOR SEQ 1D NO: 12:
SEQUENCE CHARACTERFETICS:
LENGTH: 1253 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      291 ASPRSPPVQPHTPVT 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1261 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 A-PLSTSMKPNDACT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Shelton, Dennis K. REGISTRATION NUMBER: 26,
                                                                                                                                                                                                                                                     ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                             Best Local Similarity 30.7
Matches 23, Conservative
                                                                                                                                        single
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                                                                                                              TYPE: amino acid
STRANDEDNESS: sir
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                                                                                                                                                                                                                                 CRIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
US-08-252-966B-1H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                       US-08-252-966B-12
                                                                                                                                                                                                               HYPOTHETICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
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DEFINE THE OF INTOMINITION. MICHEL ALL.

TILLE OF INVENTION: MICHEL ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMON-
TILLE OF INVENTION: MICHEL ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMON-
TILLE OF INVENTION: MICHEL ACID AND AMINO ACID SEQUENCES
FILLE OF INVENTION: AFFECTION OF SECUENCES AND THERAPEUTICS
CURRENT APPLICATION: MIMBER: US 60/094,196
PRICE APPLICATION NUMBER: US 60/094,196
PRICE FILING DATE: 1998-02-18
PRICE FILING DATE: 1998-02-18
PRICE FILING DATE: 1998-07-27
NUMBER OF SEQ ID NGS: 33:442
SEQ ID NGS: 33:442
LENGTH. 169
                                                                                                                                                                   238 PQPPPQ-----HPSQPSSQSAPIPAQPAPQFTAAKVSKPSQLQAHIPASQQIPPLPPY 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 PAPQEVUESIQVHSSQPSGQAVTVSRQPSLNAYNSL-----:RSGLKRTPSLK---- 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 PGSRATISTPSSSSSPARIACSGCRRPNPRAGSTLPPAPSRCCRSRISRQRSRSTRPTCG 51
                                                                                                                1 PPPAPQRVDSIQVHSSQPSGQAVTVSRQPS--LNAYNSLJRSGLKRTPSLKPDVPPKPSF
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APPLICANT: Wilson, Angus
APPLICANT: Herr, Winship
IITLE OF INVENTION: A NOVEL EKARYCTIC TRANSCRIPTION PROTEIN:
IITLE OF INVENTION: HOST CELL FACTOR
NUMBER OF SEQUENCES: 15
DB 1; Length 1261; 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indeis
                                                           35; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17.8%; Score 67; DB 4;
27.4%; Pred. No. 4.6;
tive 14; Mismatches 2
Score 68; DB
Pred. No. 44;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 30563, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50 -- PDVPPKPSPAPLSTSMKPNDAC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 WIPTVPPVPA -- - ASTSTRPTRHC 82
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-NGS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/08046585
Patent No. 5453362
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Pseudomonas aeruginosa
08-09-252-991A-30563
18.1%;
30.7%;
                                                                                                                                                                                                                                                                              291 ASPRSPPVQPHTPVT 305
                                                                                                                                                                                                                           59 A-PLSTSMKPNDACT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suery Match
Rest Local Similarity 27.4%
Matches 23; Conservative
                                                           23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM IYPE: Floppy
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US-08-393-703-5

US-08-393-703-5

Sequence 5, Application US/08393703

Parent No. 5585239

GENERAL INFORMATION:
APPLICANT: Lamarco, Kelly
APPLICANT: Herry Wissinp

TILLE OF INVENTION: A NOVEL FRARYOTIC TRANSCRIPTION PROPERTY:
TUTLE OF INVENTION: A NOVEL FRARYOTIC TRANSCRIPTION PROPERTY:
NUMBER OF SEQUENCES: 15

CORRESPONDENCE ABURESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17.6%; Score 67; DB 1; Length 2035; 32.9%; Pred. No. le+02; tive 10; Mismatches 27; indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: FLEER, HOUBACH, TEST, ALGRITTON & HEAHERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco CITY: San Francisco COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION RELEASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 05/28/393,703
FILING DATE: 12+FEH-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: 050400 NUMBER: 36,617
RESISTRATION NUMBER: 36,617
REFERENCE/DOCKET NUMBER: 6-57503-2/RAG
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1989
TELEFAX: (415) 398-3249
TELEFAX: (415) 398-3249
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARRATERISTICS:
LENGTH: 2035 amino acids
Patentin Release #1.0. Version #1.25
                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: OSMBAN, RICHARD A 51.07
REGISTRATION NUMBER: 36,1.27
REFERENCE/COCKET NUMBER: A-57503-1/RAO
TELECOMMUNICATION INFORMATION:
TELEFAX: (415) 781-1989
TELEFAX: (415) 399-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 5
                   CURRENT APPLICATION DATA:
APPLICATION NOMBER: US/01/046.5285
FILLING DATE: 12-7488-1993
CLASSIFFOATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZZP 94111-4187
COMPUTER READABLE FORM:
REDIGM TYPE: Floppy disk
COMPUTER: HW PC computib e
OPERATING SYSTEM: PC POSAMS DOS
                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 2035 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Rest Local Similarity 32.5%
Annes 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear / MOLECULE TYPE: peptide US-08-046-585-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1800 PPSKAPM 1806
                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 KPSFAPL 61
SOFTWARE:
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